

Agriculture, Forestry and Fisheries

Integrated Growth and Development Plan 2012



agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

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Agriculture, Forestry and Fisheries

Integrated Growth and Development Plan
2012

2012

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Foreword by the Minister of Agriculture, Forestry and Fisheries, Ms Tina Joemat-Pettersson

It gives me great pleasure to present the *Integrated Growth and Development Plan (IGDP) for Agriculture, Forestry and Fisheries* for the Medium Term Expenditure Framework (MTEF) period 2011/12 to 2014/15, which outlines key areas of development in the sector over the next four financial years. This is the first time that the three subsectors of agriculture, forestry and fisheries have developed a common vision and integrated implementation framework.

South Africa's Agriculture, Forestry and Fisheries Sector has not grown as fast as other sectors over the past few decades, but remains a critical sector for employment and food security among the country's rural poor in particular, and is thus a sector in which development opportunities should be vigorously pursued and not overlooked. According to our Constitution, every citizen has the right to have access to sufficient food and water, and the State must, within its available resources, avail to progressive realisation of the right to sufficient food. Right now, a fifth of South African households have inadequate access to food, and we need to do something about this through developing a prosperous sector that provides people with a hand out of poverty. At the same time the direct reliance of the sector on South Africa's natural capital, means that we have tremendous responsibility to maintain the fragile balance between achieving rural development within the constraints required for assuring ecological sustainability, such that the opportunities available to our grandchildren are not compromised.

The IGDP describes the current realities and challenges of the Agriculture, Forestry and Fisheries Sector and outlines goals, objectives and the interventions that need to be made to achieve the vision of "an equitable, productive, competitive, and sustainable Agriculture, Forestry and Fisheries Sector, growing to the benefit of ALL South Africans".

The IGDP takes its cue from the twelve outcomes identified in the Medium Term Strategic Framework to address the country's key challenges. Achieving these outcomes will be rely on intergovernmental cooperation in the implementation of key policies including the New Growth Path, the Industrial Policy Action Plan, the Comprehensive Rural Development Programme (CRDP) as well as this Integrated Growth and Development Plan (IGDP) for agriculture, forestry and fisheries. In terms of the outcomes, the DAFF contributes directly to three of the 12 outcomes – to achieve decent employment through inclusive economic growth (Outcome 4), to have vibrant, equitable and sustainable rural communities contributing towards food security for all (Outcome 7) and to protect and enhance our environmental assets and natural resources (Outcome 10). The IGDP will play a crucial role in achieving these three outcomes, and DAFF remains committed to working together with industry in implementing the interventions that have been identified.



The goals of the IGDP include attaining equity and transformation, equitable growth and competitiveness, environmental sustainability and good governance. Among the work we have outlined for ourselves is to refine the Agricultural Black Economic Empowerment (AgriBEE) Charter to address transformation constraints in the sector. We further proposes to publish the AgriBEE Charter in terms of section 9 of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003), in order to pave the way for implementation and enforcement. The Forestry Charter, the most advanced of the three sectors, must be implemented. A charter for fisheries needs to be developed and is a priority for the department.

In conclusion, I wish to extend my appreciation to my Deputy Minister, Dr Pieter Mulder, for his dedication, expertise and support. Secondly, I would like to express my gratitude to the Chairpersons and Members of the Portfolio and Select Committees on Agriculture, Forestry and Fisheries in the National Assembly and the National Council of Provinces for their guidance, knowledge and oversight. I would also like thank the agricultural industry, organised agriculture and our agribusiness partners for their continued efforts to achieve economic prosperity of the sector. Lastly, I want to thank the department, provincial departments and state-owned entities for their commitment in meeting the objectives of the Department. By working together, we can achieve our vision!



A handwritten signature in black ink, which appears to read 'Tina Joemat-Pettersson'. The signature is stylized and written diagonally.

Ms Tina Joemat-Pettersson

MINISTER OF AGRICULTURE, FORESTRY AND FISHERIES

Vision statement

"Equitable, productive, competitive, profitable and sustainable agriculture, forestry and fisheries sectors, growing to the benefit of all South Africans".

Statement by the Deputy Minister, Dr Pieter Mulder

As we present the *Integrated Growth and Development Plan (IGDP) for Agriculture, Forestry and Fisheries* for the Medium Term Expenditure Framework (MTEF) period 2011/12 to 2014/15, I believe that it is important to remember the cliché, stating that any plan is only as good as its execution.

To farm successfully in today's challenging agricultural environment requires much more than only the desire to farm. One needs agricultural knowledge, financial expertise, mechanisation, marketing, production, etc. to succeed as a farmer. I am however proud to say that South Africa has some of the best farmers in the world. Our farmers overcome enormous difficulties, including climate challenges like floods and droughts and compete in international markets where farmers from other countries enjoy governmental protectionism and subsidies.

Both commercial and emerging farmers are important role players to make a success of agriculture in South Africa. The great challenge in the next number of years will be to find the right balance between these role players.

The IGDP provides a structural view of the sectors' current circumstances and the challenges we face. It further describes the goals and the actions needed to achieve South Africa's vision for Agriculture, Forestry and Fisheries management and ensuring productive and sustainable sectors.

The agriculture, forestry and fisheries sectors face many challenges and have not shown the same growth over the last decade as other sectors. I believe that we can be successful if we build strong productive partnerships between the Department, SOE's, the relevant organizations and the private sector. It is key that we base our decisions and policymaking on facts and do so in the best interest of South Africa. This approach will ensure the successful execution of the IGDP and yield the much needed job creation within the sectors.

I wish to thank the Minister, the Director General, the Department, Organized Agriculture and the industry for their cooperation. We do not have any other option but to make agriculture, forestry and fisheries succeed.



A handwritten signature in black ink that reads "P. W. G. Mulder".

DR PIETER MULDER, MP

DEPUTY MINISTER: AGRICULTURE, FORESTRY AND FISHERIES

Overview by the Director General, Mr Langa Zita

The Department of Agriculture, Forestry and Fisheries was created by means of amalgamating the previous Department of Agriculture, with the forestry and fisheries branches previously situated in other national departments. The process has been time-consuming and challenging, however the rationale was always clear. Agriculture, forestry and fisheries have a strong affinity with one another because they are primarily resource-based and largely rural, but of a very different character than, say, mining. While many of the key interventions in these three sectors are and will likely remain distinct, the sectors share a number of common strategic questions which are usefully considered together: How can we ensure the respective growth paths become more inclusive? What should sectoral development look like? What market dynamics are at work in shaping these sectors, and how could we influence these to operate differently? How can we promote growth without compromising the integrity of the underlying natural resource base? How can better care of the natural resource base promote stronger growth? How can we implement our policies and programmes more efficaciously for the common good while keeping an eye on the most vulnerable?

This *Integrated Growth and Development Plan (IGDP) for Agriculture, Forestry and Fisheries* explores the commonalities and differences between the three sectors while addressing these core, strategic questions. It represents our first effort to do so, and should be understood as the beginning of a work-in-progress. As a guiding vision for DAFF, the document in effect replaces the *Strategic Plan for South African Agriculture*, which was published in 2001. That document served the previous Department of Agriculture very well; while the IGDP builds on it in numerous respects, its scope is necessarily expanded and the analysis updated.

The IGDP has a logical structure. After a brief introduction, it sets out a concise analysis of the current situation in respect of our three sectors, focusing both on recent performance as well as on the underlying institutional and policy frameworks. Chapter 3 then delves into four key themes which in essence constitute the building blocks of sustainable development: equity and transformation, growth and competitiveness, ecological sustainability and governance. By organising the discussion according to these building blocks, we can see where we are doing well, where we fall short, and where we should look for answers in order to sustainably advance our three sectors in pursuit of our main objectives. Thereafter, Chapters 4 through 7 seek to methodically translate the high-level analysis and discussion into the practical measures necessary to effect the changes we wish to see.

I believe this preliminary effort bears out the wisdom of having brought together agriculture, forestry and fisheries under one roof. It brings greater clarity to the challenges and tasks before us, to the advantage of all three sectors individually as well as collectively.

Finally, I wish to take this opportunity to express my gratitude to the Minister, the Deputy Minister and the Chairpersons of the Parliamentary Committees for their support and guidance. Furthermore, I would like to extend my appreciation to DAFF staff who participated in the development of the IGDP, as well as the reference group members representing industry and academia.



A handwritten signature in black ink, appearing to read 'L. Zita', with a long, sweeping horizontal line extending to the right.

Mr Langa Zita
DIRECTOR-GENERAL: AGRICULTURE,
FORESTRY AND FISHERIES

Acronyms

ANC	African National Congress	FIP	Fruit Industry Programme
ARC	Agriculture Research Council	FSP	Farmer Settlement Programme
AsgiSA	Accelerated and Shared Growth Initiative for South Africa	FTA	Free Trade Area
BEE	Black Economic Empowerment	GATT	General Agreement on Tariffs and Trade
BBBEE	Broad-Based Black Economic Empowerment	GDP	Gross Domestic Product
BCLME	Benguela Current Large Marine Ecosystem	GEF	Global Environment Facility
BER	Bureau of Economic Research	GGP	Gross Geographic Product
CAADP	Comprehensive Africa Agricultural Development Programme	HDI	Historically Disadvantaged Individual
CAMMLR	Convention on the Conservation of Antarctic Marine Living Resources	ICCAT	International Commission for Conservation of Atlantic Tunas
CARWG	Conservation Agriculture Regional Working Group	IGDP	Integrated Growth and Development Plan
CASP	Comprehensive Agricultural Support Programme	IIED	International Institute for Environment and Development
CRDP	Comprehensive Rural Development Programme	IMF	International Monetary Fund
DAFF	Department of Agriculture, Forestry and Fisheries	IOTC	Indian Ocean Tuna Commission
DED	Department of Economic Development	IP	Intellectual Property
DRDLR	Departments of Rural Development and Land Reform	IPAP	Industrial Policy Action Plan
DTI	Department of Trade and Industry	IUCN	International Union for Conservation of Nature
EBM	Ecosystem-Based Management	LARP	Land and Agrarian Reform Project
EIU	Economist Intelligence Unit	LDSP	Livelihoods Development Support Programme
EU	European Union	LIMS	Livestock Information Management System
FAO	Food and Agricultural Organisation of the United Nations	LRAD	Land Redistribution for Agricultural Development Programme
FAPRI	Food and Agricultural Policy Research Institute	M&E	Monitoring & Evaluation
FED	Forestry Enterprise Development	MAFF	Ministry of Agriculture, Forestry and Fisheries
		MAFISA	Micro Agricultural Financial Institutional Scheme of South Africa
		NAMC	National Agricultural Marketing Council
		MPA	Marine Protected Area

MTEF	Medium Term Expenditure Framework
MTSF	Medium Term Strategic Framework
NEPAD	New Partnership for Africa's Development
NFAP	National Forestry Action Programme
NFP	National Forestry Programme
NIPF	National Industrial Policy Framework
NTB	Non-Trade Barrier
OBPM	Outcome Based Performance Management
OECD	Organisation for Economic Cooperation and Development
PES	Payments for Ecosystem Services
PSE	Producer Support Estimate
R&D	Research and Development
REDD	Reducing Emissions from Deforestation and Degradation
RFMO	Regional Fisheries Management Organizations
SACU	southern African Customs Union
SADC	southern African Development Community
SAFEX	South African Futures Exchange
SEAFO	South East Atlantic Fisheries Organization
SESP	Second Economy Strategy Project
SG	Sector Goal
SMME	Small Medium and Micro Enterprises
SOE	State-Owned Enterprises
SDA	Service Delivery Agreements
SPSAA	Strategic Plan for South African Agriculture
SPGRC	SADC Plant Genetic Resources Centre
SWIOFC	South West Indian Ocean Fisheries Commission
TIPS	Trade and Industrial Policy Strategies
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
US	United States
WTO	World Trade Organisation

1 Introduction

Despite their small direct share of the total Gross Domestic Product (GDP), agriculture, forestry and fisheries are vital to South Africa and its economy. These sectors furnish some of the most important material needs of South Africans such as food and fibre, while providing large numbers of employment and self-employment opportunities. However, there is a widespread perception that these sectors are not fulfilling their potential, particularly in terms of job creation. What constrains these sectors from meeting their potential? Indeed, what accounts for the fact that employment in some of these sectors continues to decline, and what can be done about it?

The Integrated Growth and Development Plan (IGDP) has been developed to provide a long-term strategy for the growth and development of South Africa's agriculture, forestry and fisheries sectors, so as to enable them to address key national priorities and outcomes. The purpose is to develop a common vision encompassing all three sectors, and to develop an integrated implementation framework which allows common issues to be addressed in unison, and specific issues to be addressed in separate policies and strategies. The IGDP is furthermore a response of the Minister to the national goals outlined in the Medium Term Strategic Framework (MTSF) document, adopted July 2009, and stated through the 12 Outcomes identified during the January 2010 Lekgotla.

The last half century has seen substantive shifts in the structure of South Africa's agricultural sector. Farm size has grown, farm numbers have declined, and production has increasingly emphasized higher-value commodities, notably a range of horticultural crops. However, the agriculture sector's share of GDP has been steadily declining for many decades. For instance, from 1965 to 2009, agriculture's share of total GDP declined from over 9% to around 3%. Given these realities, it is argued within the context of the IGDP that the role of the agricultural sector lies in ensuring national and household-level food security; ensuring social and economic growth and development through job creation; and contributing to rural socio-economic development. The Strategic Plan for South African Agriculture (also known as the 'Sector Plan') was published in 2001, and presented a shared perspective from government and industry on strategic issues in the sector. Strategic goals identified in this plan included enhanced access and participation; competitiveness and profitability; and sustainable resource management. A review of the Strategic Plan completed in 2008, identified a number of ongoing concerns, namely the slow pace of implementation, limited implementation capacity within government, and limited coverage and inadequate funding of some critical programmes. Other factors identified by the review as contributing to the lack of impact of the Strategic Plan, included weak implementation capacity and the absence of a comprehensive implementation plan.

Forestry plays an important role in contributing to local and national economic output and social wellbeing, through the production of timber and non-timber forestry resources from plantation forests, natural forests and woodlands. Managing forest resources requires flexibility to accommodate change. This may include pressure to



address communities needs, incorporation of conservation practices, water catchment management principles and new commercial and non-commercial opportunities for woodlands, forests and plantation use. The National Forestry Action Programme (NFAP) was published in 1997, with the expressed purpose of mobilising and organising national and international resources and catalysing action to implement programmes and plans in a coordinated manner. It set out the most important work to be done in the first three years of implementation, identified specific goals for each issue, and provided a framework for implementing forestry policy as set out in the White Paper, i.e. to promote a thriving, equitable and sustainable forestry sector. A review of the NFAP in 2003, led to the development of the National Forestry Programme (NFP), using a globally-adopted framework for national forestry policy development, planning and implementation. It was designed to address forestry issues within the context of sustainable development, to link all government and non-government forestry plans and strategies, and to maximise the contribution of forestry to poverty reduction. The process of developing a long-term strategy for the forestry sector was initiated in 2007. After a two-year period of consultation and deliberation between government and industry, the *Forestry 2030 Roadmap* was finalised. Among other things, this roadmap seeks to guide the forestry sector to realise its full potential to create jobs and wealth, as well as to promote biological diversity.

The fisheries sector has probably undergone the greatest changes in recent years through the reorganisation of fishing rights. Nevertheless, it remains a challenge to balance the high demand for access to marine living resources with the need to ensure the environmental sustainability of resources. Being the meeting place of land and sea, the coast is a distinctive, complex and interconnected natural system with finite and vulnerable resources that are impacted by perturbations such as pollution, inappropriate development and environmental degradation. It provides substantial opportunities for economic and social development, but care must be taken such that these can be enjoyed on a sustainable basis. Although there are detailed policies addressing the allocation and management of long-term commercial fishing rights, as well as the management, methodologies and procedures to be applied in specific subsectors, there is no overarching plan for fisheries. The expectation is therefore that the IGDP will address this gap by providing strategic direction to the fisheries subsector.

The IGDP was formulated whilst the Department of Rural Development and Land Reform initiated the process of devising its approach to rural development and agrarian transformation, in the form of the Green Paper and the Comprehensive Rural Development Plan, and the Economic Development Department was drafting its New Growth Path. At a strategic level, the IGDP for Agriculture, Forestry and Fisheries thus seeks to be consistent with emerging policy directions from elsewhere in government, while at a practical level, when devising actual interventions based on the IGDP, the Department will continuously strive to align itself with other departments' activities through intergovernmental planning systems.

Ultimately, the IGDP seeks to identify what all role-players must do in order to achieve the common vision of "equitable, productive, competitive, and sustainable agriculture, forestry and fisheries sectors, growing to the benefit of all South Africans".

Vision statement:

"Equitable, productive, competitive, profitable and sustainable agriculture, forestry and fisheries sectors, growing to the benefit of all South Africans".

2

Situation analysis

2.1 Sector profile

2.1.1 Agriculture

The 20th century saw substantive shifts in the structure of South Africa's agricultural sector (Liebenberg *et al.*, 2010). For the most part, these shifts involved the long-term, relative decline of the agricultural sector as the economy diversified, together with the relative decline of food prices. However, in more recent years, owing to new global realities, we have witnessed episodes of significant food price inflation, amidst growing volatility of food prices (Vermeulen and Meyer, 2009), and general economic instability. The concern over rising and more volatile food prices has prompted many countries to re-examine the economic and social role of the agricultural sector, and South Africa is no exception. It is argued within the context of the IGDP that the importance of agriculture in the broader economic framework of South Africa must be re-emphasised, focussing in particular on:

- ensuring national and household-level food security;
- the economic growth and development of agriculture; and
- rural economic development.

It is within this context that the IGDP seeks to position agriculture for the purpose of improving national food safety and security, and agricultural economic output in a profitable and sustainable manner, through a qualitative and quantitative improvement of South Africa's agricultural productivity, and its trade and regulatory environment. By achieving the aforementioned, agriculture can contribute vitally to rural economic growth and development, and thus increase rural employment, both on- and off-farm.

Types of producers

The agricultural sector subsumes three distinct types of producers:

1. **Commercial farmers** number less than 40 000 and are predominantly white. They occupy approximately 82 million hectares, and appear to be responsible for more than 95% of South Africa's formal marketed agricultural output. Since the mid-20th century, there has been a steady decline in the number of commercial farming units, resulting ultimately in a significant concentration of farm holdings. The process is complex, but among other things reflects the fact that as the South Africa economy has diversified, farming has become a relatively unattractive career choice, such that upon retirement many commercial farmers have no one to whom they can bequeath their farms. Despite the decrease in the number of farming units, output from commercial agriculture has continued to grow, implying an increase in the efficiency of production. Export growth has continued, especially in the horticultural sector, however the robust trade surplus in the production of agricultural commodities is increasingly offset by the net import of processed foods. Trade figures show farm exports of South Africa increased from R45 billion in 2008 to R46 billion in 2009 while imports decreased by 8,5% to R35 billion in 2009. Commercial farmers remain primarily family businesses, but there is a discernible trend towards the 'corporatisation' of farming, especially in some subsectors.
2. **Smallholder farmers** number approximately 200 000 (belonging to about 140 000 households), and are predominantly black. Most of these farmers are located in the former homeland areas of the country, which comprise about 14 million hectares of agricultural land, but which also accommodate far larger numbers of subsistence producers. Agricultural conditions within the former homelands are complex: on the one hand, infrastructure is poor and land degradation is widespread; on the other hand, some areas are characterised by seemingly large amounts of under-utilised arable land of good quality. The impediments to fuller and more productive use of agricultural resources in the former homelands remain controversial.

3. **Subsistence producers** consist of the approximately two million households who practise agriculture mainly for purposes of own-consumption, largely by means of gardening. Few households involved in subsistence production are, or seek to be, fully self-sufficient in food. Rather subsistence production is widely seen either as a means of ensuring a basic level of nutrition or reducing the grocery bill.

Production

Production statistics generally capture trends among commercial producers and omit smallholder and subsistence production. The quantity of total agricultural output grew at an average annual rate of 2,3% from 1975 to 2010. Over the same period, field crop production increased by 2,8%, horticultural production by 2,9%, and livestock production by 2,3% per annum (see Figure 1). By value, the largest component of the agricultural sector is livestock and livestock products, owing to the fact that three quarters of the country's farmland is mainly suitable for livestock production, however, horticultural exports are capturing an increasing share of total agricultural output. Variations in crop production are largely derived from the variability in maize production, which is, in turn, influenced by climatic conditions, producers' willingness to plant, and industry average yields. Farmers' willingness to produce, is, in turn, influenced by the profitability of production i.e. price offers, both domestically and internationally, and the suitability of the natural resource base. The tradeoffs between these factors influence the affordability and availability of food. However, self-sufficiency levels are currently below domestic consumption requirements for basic food commodities and are supplemented through imports e.g. red meat, wheat and other livestock products. Research conducted by South Africa's Competition Commission further suggests that an increase in anti-competitive behaviour has negatively impacted on food productivity, food availability and affordability within the country. Moreover, cattle farmers and the wildlife ranching industry are increasingly experiencing losses as a result of predation; the loss is estimated to have been well over R450 million in 2006.

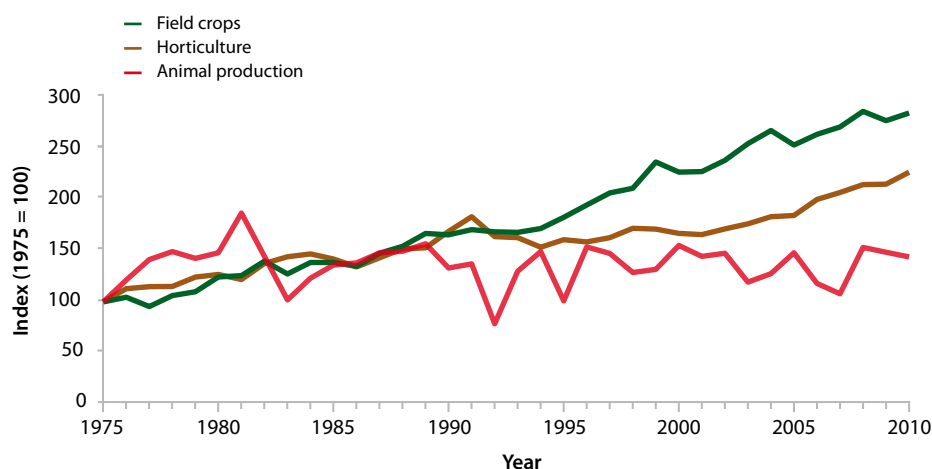


Figure 1: Indices of the volume of agricultural production (DAFF, 2011)

Profitability of the sector

Agriculture incomes are volatile owing to both production and price risk. Figure 2 shows aggregate net farm income for South Africa's commercial farm sector for the period 1980 to 2009, adjusted for inflation. The figure conveys some idea as to why agriculture is such a challenging sector. While the past decade would appear to show an upward swing (despite a deep trough around 2004-05), it is meaningless to speak of real trends. By the same token, the figure suggests that there is not much evidence in favour of the so-called 'cost-price squeeze' that has supposedly inhibited optimal growth for the past few decades. According to the Bureau for Food and Agricultural Policy's Baseline (2010), following the trend in the field crops sector, the real gross income of the agricultural sector experienced a 34% increase during 2006-2008, resulting in a record increase of 51% over the 2005 level (see figure 2). After the decline in commodity prices and subdued economic growth due to the recent global recession, gross income decreased by 6% in 2009. A further decline of 7,6% was anticipated in 2010 as a result of declining and limited growth in output of field crops. However, the expected recovery in commodity prices as well as economic

growth in 2011 has been projected to reverse the trend and enhance the growth of gross income of the agricultural sector by an average of 2,5% annually from 2011 to 2019.

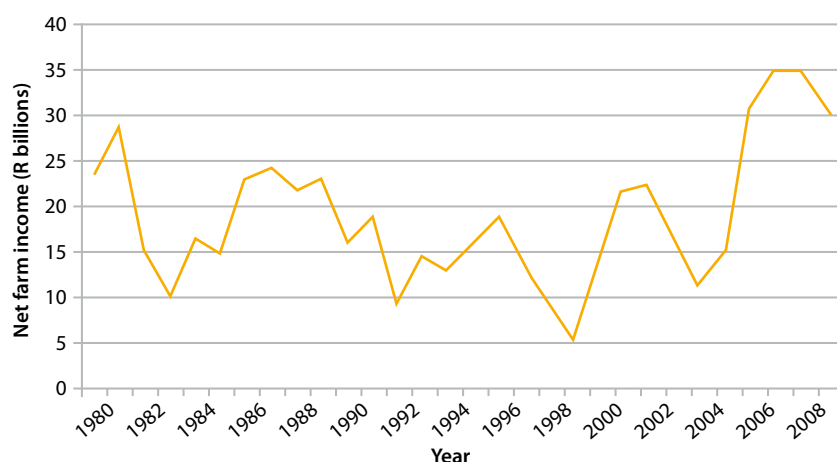


Figure 2: Aggregate net farm income, 2009 constant rand (DAFF, 2011)

Contribution to the economy

After adjusting for inflation, between 1980 and 2008 South Africa's gross value added in agriculture, forestry and fisheries increased by about 75%, whereas the economy as a whole grew by more than twice as much (Stats SA, 2009). Thus, agriculture represents a declining share of the South African economy (Figure 3). However, agriculture's small contribution tends to overshadow the many other positive contributions this sector makes to the economy, i.e. secondary growth generation of approximately 20% to 30%. Agriculture has some of the strongest backward, forward and employment multipliers in the economy, and provides a social welfare net to the most vulnerable in society, especially in rural areas. Eight percent of total employment is by primary agriculture. It is, however, a concern that agriculture has lost 50% of its employment over the period 1970-95, and a further 5,1% decline in the past year (DAFF, 2011). This is especially important in light of the fact that it has one of the strongest employment multipliers in the economy. The sector as a whole is a net earner of foreign exchange. However, cognisance must be taken that South Africa is a net importer of processed foods.

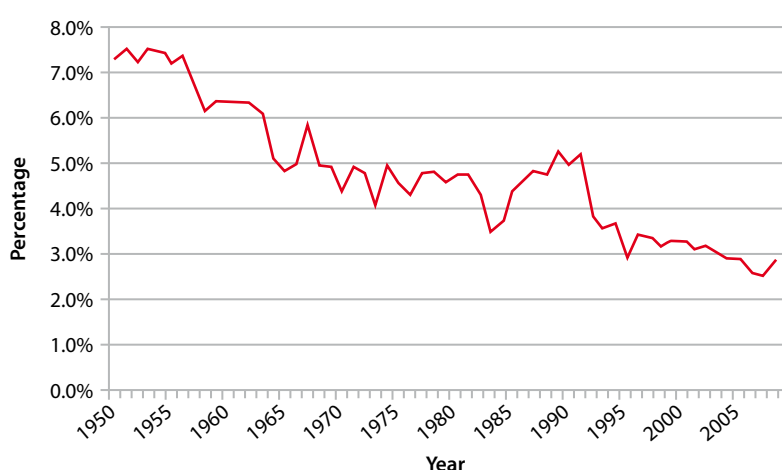


Figure 3: The contribution of agriculture, forestry and fisheries to GDP, 1950-2008 (Stats SA, 2009)

Potential for growth

Arable land capable of sustaining intensive to moderately well-adapted cultivation amounts to about 12,6% of South Africa's land. Only 2% (2 446 million hectares) is prime agricultural land (Classes I and II), and an

additional 1,5 million hectares are irrigated land. Together, the high potential land (prime and irrigated land) makes up approximately 4% of the total area. The potential for lateral expansion is thus extremely limited, and infrastructure and services to support sustainable land use are also inadequate. Increasing competition over scarce water resources is a further constraint. Opportunities for further growth thus lie elsewhere, mainly greater technical efficiency, accessing more niche markets, and value-addition.

Safety and security

Between April 2008 and March 2009, about 121 000 head of stock were stolen at a total value of about R365 million (34 000 cattle, with a monetary value of R255 million; 28 000 goats, at a value of R40 million; and 60 000 sheep, valued at R71 million). Stock theft has become one of the largest problems facing livestock farmers, especially along the borders of Swaziland, Lesotho, Namibia and Zimbabwe. There are threats to food safety with increasing illegal importing of agricultural goods, especially with regard to animal diseases. There is also a persistence of violence against farm workers and farmers, highlighting the fact that both groups are vulnerable, albeit in different ways.

Employment

There has been an absolute decline in employment on commercial farms over the long term, reflecting above all the process of mechanisation. Since 1971, agricultural employment has dropped by almost half. Between 1993 and 2007, total agricultural employment declined by 27%. Moreover, this latter period has witnessed a gradual process of casualisation, in the sense that the number of 'regular' farm jobs has declined more rapidly than casual farm employment. While the overall pattern of employment shedding is similar to that of the agricultural in many developed countries, in South Africa it is deeply problematic because it aggravates rural unemployment and thus represents a farm model that is 'socially inefficient' (Lipton, 2010).

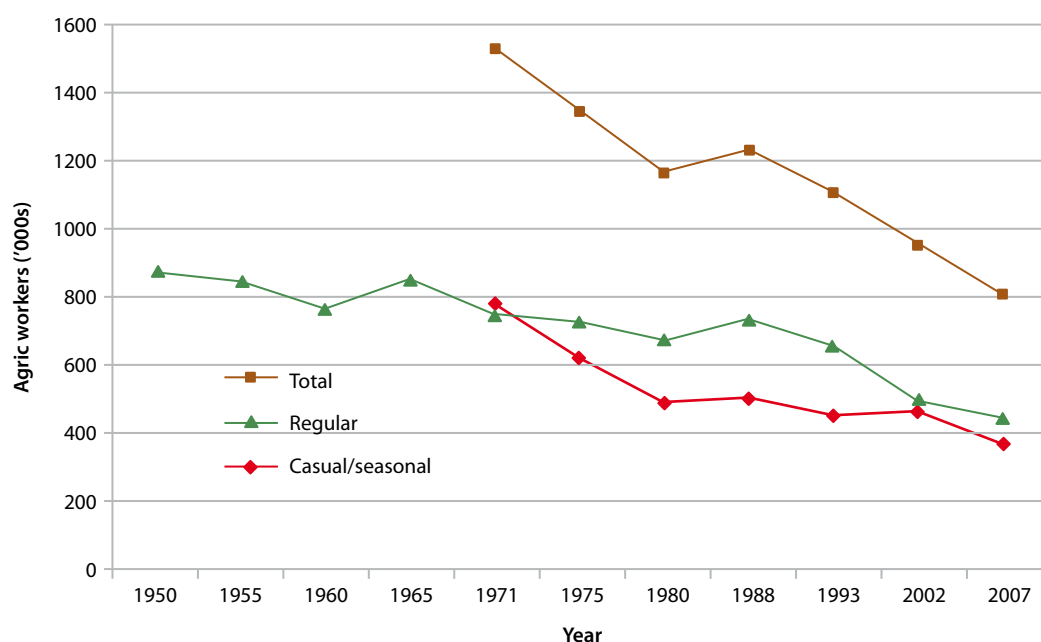


Figure 4: Trends in agricultural employment (Stats SA, various)

Equity in the sector

According to the Labour Force Survey, over the period 2001 to 2004, the number of black people practising agriculture at some scale increased from about 3,9 million to 4,8 million, but then declined to about 4,4 million by 2007. Of these, a few hundred could be regarded as large-scale commercial farmers, approximately 200 000 are smallholder farmers, and the rest are subsistence farmers. Thus the sector continues to wrestle with entrenched inequalities.

Support to the sector

Commercial, smallholder, and subsistence farmers currently receive less support from the State than their counterparts in every industrialised country in the world. These industrialised countries also happen to be among the most important destinations for South Africa's agricultural exports, where their competitiveness is undermined by our trade partners' subsidies. Measured in terms of the Producer Support Estimate (PSE) as calculated by the OECD, an internationally accepted benchmark, direct support provided to the agricultural sector in South Africa is similar to that of countries like Chile and Brazil. These latter two countries are making concerted efforts to increase support to their agricultural sectors in various ways, but the level of support offered to producers in South Africa and in these two countries is considerably lower than the OECD average. The total cost of support to South Africa's agricultural sector, measured as a percentage of GDP, decreased from 1% between 1995 and 1997, to 0,6% between 2005 and 2007. This is considerably lower than the average of 1,0% for developed countries. The difference in the total cost of support measured in value terms is significant if one considers the enormous difference between the GDPs of developed countries and that of a country like South Africa. Prior to the 1970s, the intensity of agricultural R&D investment in South Africa exceeded that of Australia and the United States, but has consistently lagged behind the United States since 1980.

Since 1994, State support has largely shifted away from the large-scale commercial farming subsector, in favour of smallholders and subsistence producers. However, due to the fact that the number of smallholders and subsistence producers is so vast relative to the extension corps, the actual support rendered to smallholders and subsistence producers has been patchy and generally inadequate.

2.1.2 Forestry

Following two decades of shrinkage of the country's plantation resources and increasing pressure on natural forests and woodlands, the forestry sector's goal is to ensure renewed growth, transformation and sustainability throughout the value chain. Of increasing importance is the role that can be played by plantations and the timber processing and downstream manufacturing industries, especially in boosting South Africa's energy security and meeting its commitments to addressing climate change.

Forests are renewable ecosystems capable of providing a wide range of environmental, economic, social and cultural benefits (National Forest Act, 1998). Broadly speaking, there are three categories of forests: indigenous forests, woodlands and plantation forests. 'Forestry' on the other hand refers to all activities or practices associated with any of the types of forests mentioned above. Forestry activities in indigenous forests and woodlands are not limited to the protection of the resource as a natural heritage, but include their development, use and management, as well as the management and processing of Non-Timber Forest Products (NTFPs). Plantation forestry practices include, among others, the establishment of vast areas of land with exotic species that are harvested and processed into pulp for the paper and packaging industries, or sawn timber for the furniture and construction industries.

South Africa's indigenous forests cover approximately 0,5% of the country's total land area. There are approximately 16 275 forest patches, ranging from the smallest forests covering 2 hectares to the largest single forest of 25 706 hectares (Knysna-Tsitsikama forest). Woodlands comprise the most extensive vegetation type in South Africa. The potential area covered by woodlands is estimated at 39-42 million hectares depending on the classification system used (Table 1).

Table 1: Distribution of forests

Forest Type	Area (millions of hectares)	% of Land Cover
Indigenous forests	0,5	0.5%
Woodlands	39	40%
Plantation forests	1.3	1.1%

Sources: Mucina and Rutherford, 2006; DWAF, 2009a.

Types of producers

- a. **Commercial forestry.** The area under commercial forestry comprises about 1,3 million hectares, or 1% of the country's total land area. Of the land under plantation, approximately 51% is Pine, 40% is Eucalyptus, 8% is Wattle, and 0,4% under other species. Approximately 89 390 hectares were converted out of commercial timber production between 1980 and 2009 (Forestry South Africa, 2010). Eighty-two percent of all plantation estates are Forest Stewardship Council (FSC) certified. Statistics relating to the commercial forest sector are reflected in the table below. In the commercial forestry sector, 57% of the total area belongs to corporate growers, 25% to private producers, 14% to the State, and 4% to emerging farmers. Like commercial farmers, the commercial sector is affected by State Administered Pricing, especially regarding electricity and water. Between 1980 and 2009, approximately 550 000 hectares of South Africa's plantation forests were damaged by fire, while another 382 000 hectares were damaged by other causes such as insects, diseases and animals (Forestry South Africa, 2010).
- b. **Smallholder forestry.** Small growers are expanding as an alternative source of secured fibre for the forestry industry. In addition to the above, there are 37 independent small growers and 47 community woodlots, covering a total area of just under 1 000 hectares.
- c. **Subsistence forestry (woodlots, woodlands and non-timber forest products).** Twenty-seven million people rely on medicinal plants for health care; 65% of the plants used for this purpose are forest or woodland species. Between 9 and 12 million people use fuel wood, wild fruits and wooden utensils obtained from forests and woodlands. Each year, the average rural household uses 5,3 tons of firewood, 104 kg of wild fruits, 185 large poles for fences and construction, and 58 kg of wild spinach – most of which is sourced from woodlands. The direct-use value of woodland resources consumed each year is at least R8 billion. Access to woodland resources contributes between 20% and 25% of total livelihood accruals. If these goods were not available, the benefits they provide would have to be provided by the State in order to stem the tide of rural poverty. Approximately 800 000 people operate in the craft industry, which is heavily reliant on woodland resources, while up to 100 000 households in South Africa engage in small-scale trade in forest products from woodlands.

Table 2: The forestry sector in South Africa

	GDP contribution (Millions of Rand)	Employment	Number & type of producers
Commercial forestry	3 700	107 000	4 major companies
Pulp & paper manufacturers	6 500	24 000	4 major companies
Sawmillers	1 660	20 000–30 000	80 large & 240 small scale mills
Wood chip processors	960	<500	3 major companies
Composite board producers	950	6 000	4 major companies
Treated pole producers	160	5 000	4 major companies
Mining timber producers	110	2 200	10 large mills
Charcoal producers	115	5 500	160 smallholder producers

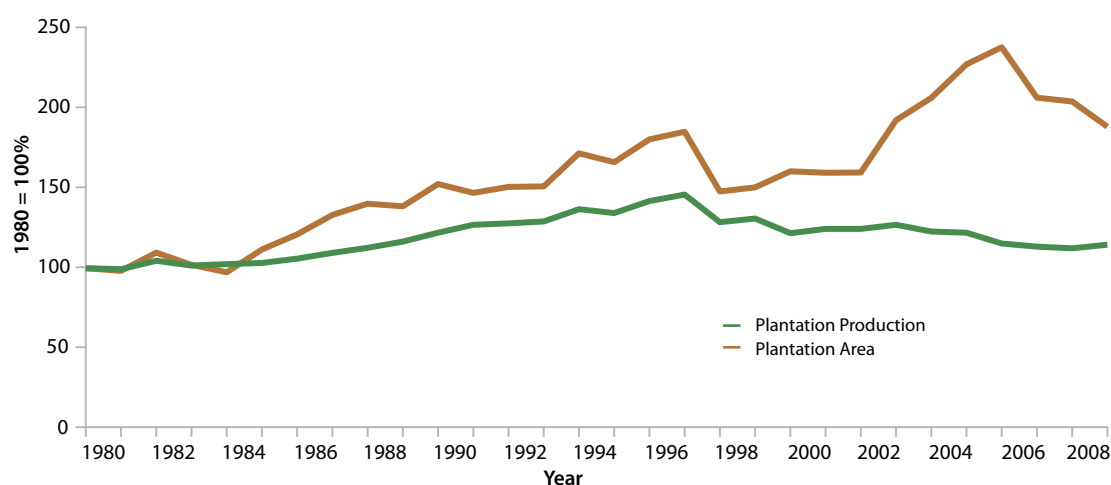
Sources: Based on 2006 plantation figures and 2003 GDP and employment figures (from Genesis Study) converted to 2006 rand

Table 3: Small growers in the forestry sector

Company	Numbers of growers	Area in ha	Average size in ha
SAPPI – Project Grow	9 810	15 000	1.5
MONDIBP – Khulanathi	3 000	7 000	2.3
NCT Forestry Coop	1 600	25 000	15.6
TWK Agriculture Ltd	500	1 800	3.6
Siyathuthuka Coop	2 860	4 560	1.6
Independent growers	+200	809	4.0
Government supported projects (11 projects)	6 200	2 584	0.4
Sub-total	24 170	56 753	4.1

Production

Although the area under plantations has decreased over the past few years from a peak of 1 518 138 hectares in 1997 to about 1 274 870 hectares in 2009, the volume of production increased by about 1,3% over the same period (Forestry South Africa, 2010; Figure 4). However, South Africa is approaching the limits of increasing productivity from a declining resource, such that it is facing a looming shortage of both softwood sawn timber and hardwood pulpwood over the medium and long term. The estimated shortage of timber saw logs is currently approximately 13% prior to adjustments. The expansion of plantation forestry is hampered by the availability of water and suitable land. As a result, the South African government has prioritised the expansion of plantations in areas where it is economically, environmentally and socially appropriate to do so. This is not just important for the country's growth but also for transformation, as it is difficult to achieve meaningful change in any of the key transformation areas in a stagnant or declining sector. For this reason, the Industrial Policy Action Plan of the DTI has prioritised increasing the area under plantations, and the use of the Forestry Transformation Charter as a growth and transformation strategy.

**Figure 5:** Round wood production, 1980–2009 (Forestry South Africa, 2010)

Profitability

The returns to forestry and forest products over time are depicted in Figure 6, relative to those of various agricultural commodities. While this does not speak directly to the question of profitability (given that there are costs other than land to be taken into account, which in any case is not homogeneous), it does suggest that forestry

makes a significant contribution hectare-for-hectare. Given looming shortages, the relative importance of forestry and forestry products is likely to grow.

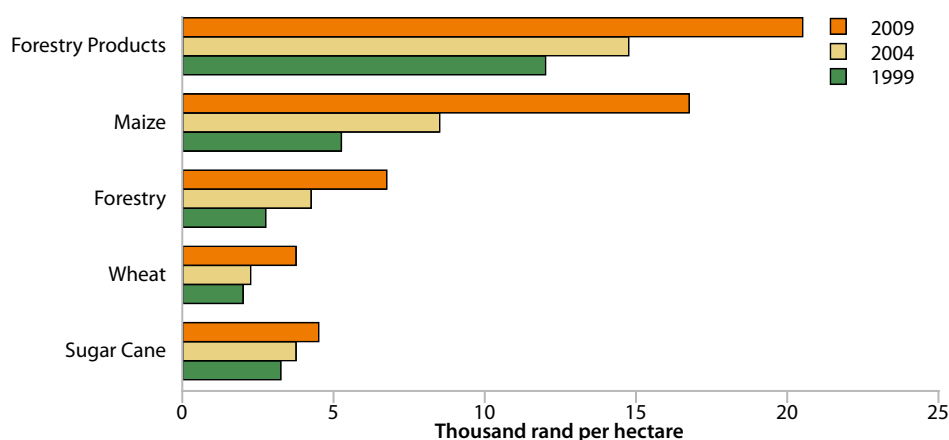


Figure 6: Comparison of gross value of output (Forestry South Africa, 2010)

Contribution to the economy

Forestry and forest products contributed about 1,2% to GDP in 2009. Figure 6 reflects the fluctuation in contribution from 1980 to 2009. In terms of regional Gross Geographic Product (GGP), forestry and forest products in KwaZulu-Natal contributed 4,5%; Mpumalanga 4,7%; Eastern Cape 0,86% and Limpopo about 0,46% (Forestry South Africa, 2010). In 2009, the export value of forest products was R12,5 billion in 2009, while the import value totalled R9,6 billion. The forestry sector employs around 170 000 workers, comprising 120 000 direct jobs and 50 000 indirect jobs (Forestry South Africa, 2010). In addition, it provides livelihood support to 2,3 million rural South Africans. The pulp and paper subsector provides approximately 13 200 direct and 10 800 indirect employment opportunities. Some 20 000 workers are directly employed in saw-milling, 6000 in the timber board and 2200 in the mining timber subsectors, while another 11 000 workers are employed in miscellaneous jobs in forestry. Labour intensity in the forestry and forest products sector is likely to change significantly over time. For example, if proportionately more land is used for pulpwood production, overall labour intensity is likely to decline, both in the forests and in the processing plants. On the other hand, a move to higher value addition, for example through high value saw log production, and processing and marketing of quality solid wood products from this resource, could contribute to higher and more rewarding employment. The choice of appropriate policy would strongly influence this picture.

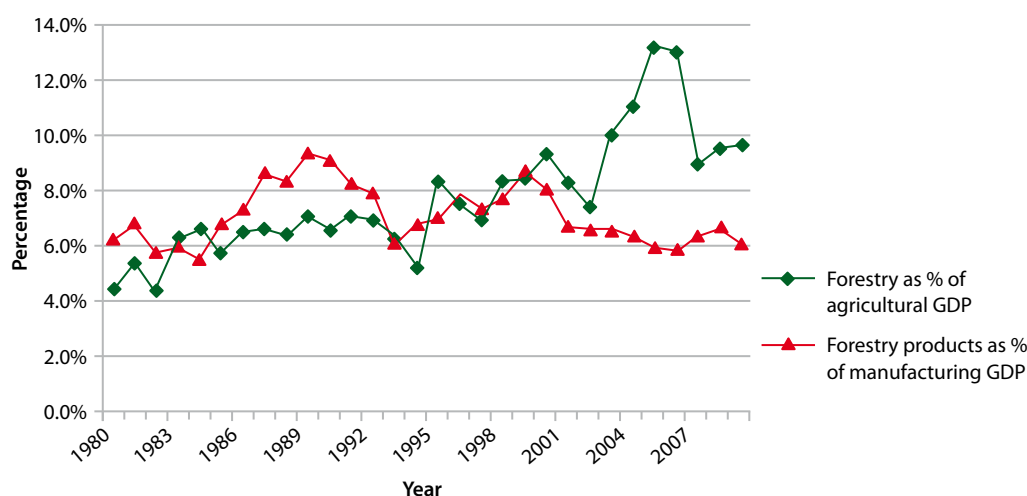


Figure 7: The contribution of forestry and forestry products to GDP, 1980 to 2009 (Forestry South Africa, 2010)

Equity

Ownership in South Africa's forestry sector is similar to that in other parts of the world where, given the long-term nature of the investments required in growing timber and the highly capital-intensive nature of large scale processing and manufacturing, there is a concentration of ownership by a handful of grower-processors. So-called 'large growers' own 50% to 60% of all plantations, of which four-fifths accrues to two companies. In addition there are two co-operatives which control a significant percentage of the independent small and medium growers – this is a model thought to be useful for the more than 30 000 other small growers in the country. Recently there has been a rapid development of black ownership and management in the form of out-grower timber schemes and increasing black ownership of larger companies with a recent empowerment transaction worth over R800 million. However, the percentage of plantation land owned by independent small and medium growers remains one of the lowest in the world.

Table 4: Equity ownership in forestry

Subsector	Weighted average	
	Black total	Black women
Plantation growers		
– Corporate	8,0% ¹	0,1% ¹
– Private farmers ²	< 5%	< 5%
– Emerging growers ²	> 95%	> 80%
Fibre (pulp, paper and composite board producers)	10.5%	0.0%
Sawmilling		
– Large millers	20,1%	0,3%
– Medium millers	5,1%	2,1%
– Small millers ²	> 80%	< 20%
Pole producers	7,6%	0,5%
Charcoal producers		
– Corporate	1,3%	> 0.0%
– Small producers ²	> 80%	> 50%
Forestry contractors	39,8%	6,7%

1) Figures estimated from survey data of fibre and large sawmilling groups (i.e. integrated forestry and forest products processing companies)

2) Estimated

Support

Companies have established projects to support small growers, i.e. SAPPI's Project Grow, MONDI's Khulanathi, etc. However, DAFF does not provide extension services. Limited support is provided by government in terms of the Forestry Enterprise Development Programme.

2.1.3 Fisheries

The mandate of DAFF's Fisheries Branch is to manage the development and sustainable utilisation of marine and coastal resources, to maximise the economic potential of the fisheries sector and to protect the integrity and quality of the country's marine and coastal ecosystems. There are two main challenges in pursuing this mandate: creating a balance between maximising the social and economic potential of the fisheries sector and protecting the integrity and quality of the country's marine and coastal ecosystems; and promoting transformation in the sector. Expansion of the fishery sector's total activity is limited by the natural productive capacity of our living marine resources, which is already under strain.

The Marine Living Resources Act, 1998 (Act No. 18 of 1998) provides for the conservation of the marine ecosystem and the long-term sustainable utilisation of marine living resources. The main tool in pursuit of these objectives is the maintenance of orderly access to exploitation, utilisation and protection of marine living resources, conducted in a fair and equitable manner.

Types of fisheries

South Africa's fishery sector comprises two distinct components: well-established wild capture fisheries, and a relatively under-developed aquaculture component. Wild capture fisheries can be disaggregated into commercial, recreational, and subsistence fisheries, each of which requires specific management interventions. The commercial fishing sector can be further broken down into highly industrialised, capital-intensive fisheries, which generally operate in deep water (e.g. hake trawl and pelagic purse seine fisheries), and 'near-shore fisheries' that are more easily accessible and tend to use traditional types of gear (line fishery and near shore rock lobster hoop net fishery).

- a. **Commercial fisheries.** Marine living resources are mostly fully utilised and many high value species are over-exploited. Some rebuilding strategies are underway, for example in hake, rock lobster and abalone. Total annual production is more than 600 000 tons, valued at R5,8 billion. Overall, South African commercial fisheries earn R992 million per annum (Branch & Clark, 2006). Demersal fishing sectors contribute approximately 70% of the total value of the fishing industry. Large-scale capital investment (e.g. in vessels and factories) is generally a prerequisite for participation; hence the relatively narrow pattern of participation in the commercial fishing sector. Long-term rights have been allocated in 22 fishing subsectors, with just over 2 900 rights holders and about 1 788 vessels. Allocation and management of commercial fishing rights are guided by five core principles:
1. Transformation;
 2. Sustainable harvesting (total allowable catch and total allowable effort);
 3. Ecological considerations (impact on marine ecosystem);
 4. Industry, socio-economic and commercial considerations; and
 5. Performance or potential to perform (financial and fishing performance, value adding, enterprise development and job creation, and compliance with legislation).

Research, especially in the fields of marine biology, population dynamics, stock assessment and ecosystem dynamics, is crucial to generating knowledge required for effective management. Monitoring, surveillance, control and enforcement are difficult and costly, not least because of the heterogeneity and geographical spread of the sector.

- b. **Recreational fisheries.** Some estimates indicate that approximately 750 000 people participate in recreational angling, although only fewer than 200 000 anglers are issued with annual recreational licenses. The actual annual catch is approximately 17 000 tons of high value species. There are important economic spin-offs from activities associated with recreational fisheries (e.g. boat-building, fishing tackle and tourism), but these have not been properly assessed.
- c. **Small-scale and subsistence fisheries.** This subsector spans a range of different levels, from truly subsistence to small-scale commercial, and it therefore requires a differentiated approach. Participation in the subsistence subsector is broad. Coastal communities traditionally made use of intertidal and shallow-water resources as a source of food, with only the occasional surplus sold, usually locally. A national survey conducted in 2002 suggested that the subsistence fisheries subsector comprised about 28 000 fisher households residing in 147 fishing communities (Clark et al., 2002). Small-scale fishers have previously not been recognised as a category of fishers in legislation, and the allocation of commercial rights to only a small number of traditional small-scale fishers has negatively impacted on the traditional fishing communities and their lifestyles. A draft policy for the small-scale fisheries sector in South Africa was gazetted in September 2010. The new policy describes how small-scale fisheries resources will be managed in terms of a

community-based co-management approach that must ensure that harvesting and utilisation of the resource occurs in a sustainable manner. The policy encourages small-scale fishing communities to establish community bodies (i.e. legal entities) to identify how individual members of the community will be allowed to benefit from rights that have been given to the community. This allows for small-scale fishing communities to play a role in the management of marine living resources, and to be involved in decision-making that involves them. Government and community bodies will manage small-scale fisheries jointly and work together in co-management committees. With the new policy, small-scale fisheries may provide substantial job creation and livelihood opportunities, if the communities are involved in and are part of the entire supply chain and related activities.

- d. **Aquaculture and aquaculture production.** Aquaculture in effect is 'farming with fish' through the construction of artificial basins or enclosures. At present, South Africa's aquaculture production is approximately 3 500 tons per annum with a value of around R218 million. Aquaculture is focused mainly on high value products (abalone, oysters mussels), but is considered to be underdeveloped relative to its potential. It has been estimated that production could increase to over 90 000 tons per year over the next 10 to 20 years, that is, 26 times its current scale. Most potential for expansion is in freshwater aquaculture. Marine aquaculture has limited potential because of South Africa's high energy coastline. However, because aquaculture development tends to be capital- and skills-intensive, strategies are required to enable participation of the poor. Distance from markets requires a focus on high value products, and there are concerns about genetic contamination and environmental impacts in sensitive areas. Aquaculture is highly dependent on culture technology, and a research strategy is under development. Major government investment is required in terms of experimental facilities and state hatcheries for this sector to be effectively stimulated.

Contribution to the economy

In terms of catch, South Africa is the largest fishing nation in Africa, but only ranks 30th among fishing nations worldwide. The fishing industry contributes approximately 0,5% to GDP, but it is regionally more important, especially in Western Cape, where it contributes approximately 2% to Gross Geographic Product (GGP). South Africa is a net exporter of fish and fish products, with exports and imports during 2008 valued at approximately R3,1 billion and R1 billion, respectively. Fifty-five percent of demersal trawl catches are exported, and in the rock lobster, squid, tuna and demersal long-line subsectors, almost the total production is exported. The commercial fishing industry currently employs approximately 27 000 people directly and approximately 100 000 indirectly. Employment in aquaculture is small at present with 1 817 employed directly on farms in 2006.

Equity

Although the current transformation profile of the sector is under review, transformation is reported to be approximately 59%, depending on the subsector (Table 5). The exclusion of some traditional fishing communities (e.g. on the West Coast) led to attempts to promote an interim relief process and new policy development. The draft small-scale fisheries policy focuses on people and communities so that members of fishing communities (including women, the youth and the elderly) can be involved in the fishing process. The idea is to develop and grow these communities and improve the benefits for the communities that come from fishing. A performance review process has been conducted for existing rights holders to assess behaviour as rights holders and better determine whether transformation goals are being met.

Table 5: Participants in the fisheries sector and the BEE profile of the sector

Fishery	Number of rights holders	Number of vessels	% black owned	Fishery	Number of rights holders	Number of vessels	% black owned
Demersal: offshore trawl	52	91	48	Large pelagic	44	24	
Demersal: inshore trawl	17	44	47	Tuna pole	191	151	55
Demersal: long lining	140	72	91	Line fish	455	453	43
Demersal: shark	6	6	73	Miscellaneous nets	120	110	51
Hake hand line	95	95	36	Oysters	104	0	60
Purse seine (pelagic)	111	89	62	Patagonian toothfish	5	2	58
Rock lobster (SC)	17	10	75	Seaweed	13	0	55
Rock lobster (WC Nearshore)	823	389	93	KZN beach seine	24	21	37
Rocklobster (WC Offshore)	246	80	62	Horse mackerel	18	13	43
Crustacean trawl	4	4	63	White mussel	7	0	100
Squid (jigging)	120	135	48				
				TOTAL	2 612	1 789	

Support

Training in fishing and maritime techniques is often conducted by fishing companies rather than government. Some NGOs are also active, for example the World Wildlife Fund in ecosystem-related issues. More emphasis is required on training and education in all aspects of the fishing industry, i.e. in product development and processing, marketing, conservation, as well as in science itself. The knowledge base on commercial and recreational fisheries is high, but low in subsistence fisheries. There is a need for innovative approaches to assess subsistence fisheries because data collection is difficult. Approaches and funding to make more effective use of traditional knowledge are required. Support and extension services are urgently required to support small-scale fishers. The draft policy recognises the need for infrastructure and services that are vital for economic development – for example transport infrastructure to markets and the provision of education and health care facilities – in order to drive small-scale fisheries.

Potential for growth

New fisheries introduced since 1994 include: large pelagics (long line), Patagonian toothfish and an experimental fishery for octopus. Certain other fisheries such as horse mackerel and round-herring have potential for expansion, but more accurate population estimates are required. Capture fisheries have limited potential for growth and many are overextended. Most of the growth potential in the fisheries sector lies in aquaculture. There is potential for value addition and job creation in, for example, the pelagic fishery for anchovy, but an implementation strategy and incentives are needed to stimulate its development. The small-scale fisheries subsector has potential for increased job creation through its new co-management approach.

2.2 Policy Framework

2.2.1 Introduction

There are a number of existing sector-specific as well as cross-sectoral policies that have bearing on the management of and growth and development in the agriculture, forestry and fisheries sectors. The IGDP seeks to optimise the effectiveness of policies governing the three sectors and fast track the implementation thereof, in accordance with the overarching national goals outlined in the Medium Term Strategic Framework (MTSF) and other cross-sectoral policies. Key goals and objectives presented in these policy documents are summarised below.

2.2.2 White papers

In terms of the agriculture, forestry and fisheries sectors, the three key policy documents which guide government are the *White Paper on Agriculture* (1995), the *White Paper on Sustainable Forest Development in South Africa* (1997), and the *White Paper on Marine Fisheries Policy for South Africa* (1997).

White Paper on Agriculture, 1995

The *White Paper on Agriculture* lists the following critical agricultural policy goals to be pursued:

- Developing a new order of economically-viable, market-directed commercial farmers, with the family farm as the basis;
- The broadening of access to agriculture via land reform should be enhanced by adequate agricultural policy instruments, and supported by means of the provision of appropriate services;
- Financial systems should focus on the resource-poor and beginner farmers, enabling them to purchase land and agricultural inputs;
- Trade in and marketing of agricultural products should reflect market tendencies;
- Agricultural production should be based on the sustainable use of natural agricultural and water resources; and
- Developing agriculture's important role in the regional development of southern Africa and other countries.

The White Paper provides a good policy framework within which agricultural development programmes can be formulated, but it is believed that more can be done within the sector by expanding the policy to include and elaborate goals:

- knowledge and information management, including spatial planning;
- institutional arrangements, including R&D, skills development, and improved support services;
- natural resource management;

The vision for agriculture is

“to direct the development of agriculture in such a way that the factors of production, together with the related functions, will be utilised in such a manner that agriculture will contribute to the optimum economic, political and social development and stability of the Republic of South Africa while simultaneously making a contribution towards the promotion of an economically sound farming community”.

- broad-based Black Economic Empowerment; and
- governance issues, such as quality control.

Some of these issues were picked up in the *Strategic Agriculture Sector Plan*, published in 2001, which identified access and participation, competitiveness and profitability, and sustainable resource management, as being the main areas where intervention was required. However, a review of this plan, published in 2008, indicated that many of these goals had not been adequately addressed. This was attributed to the slow pace of implementation, the limited capacity within government to implement many of the programmes, and the limited coverage and inadequate funding of some critical programmes. The review team also found that inadequate leadership, in directing the Strategic Plan with a focused sense of urgency and commitment, and implementation capacity (institutional and management capacity and skills), as well as the lack of a comprehensive implementation plan, were contributing factors. Key areas identified as requiring urgent strategic attention included food security, sustainability, resilience to climate change, land reform, support services, and participation of vulnerable groups.

White Paper on Sustainable Forest Development in South Africa, 1996

The *White Paper on Sustainable Forest Development in South Africa* provided a policy framework for the management and sustainable development of forests, and set out goals to be pursued over a five-year time frame. The National Forest Act, 1998 (Act No. 84 of 1998) was promulgated to give effect to the provisions of the White Paper. A number of strategies and policies were subsequently developed. These include the following:

- National Forestry Action Programme and its reviews;
- Policy regarding access to State Forests;
- Compliance and Enforcement Policy;
- Draft Strategy Framework for Forestry Enterprise Development;
- Participatory Forest Management Policy and Strategy;
- Key Issue Paper for Policy on Transfer of State Owned Industrial Plantation;
- Woodland Strategy Framework;
- Urban Greening Strategy; and
- Forestry Sector Transformation Charter.

Although the five-year time frame referred to in the White Paper (1996–2001) has lapsed, the White Paper remains relevant in terms of specific issues, e.g. conservation of natural resources, research, and community forests, to name a few. A desktop analysis conducted in 2008 indicated that the White Paper had not been implemented in its entirety and suggested that efforts should be focussed on finalising a long-term strategy, which includes a detailed implementation plan to guide the work of government and industry in taking the forestry sector forward.

The recently-published *Forestry 2030 Roadmap*, for effective and sustainable development of all forestry resources, presents the following strategic objectives as agreed between government and industry:

- Facilitate improved timber availability and secure a supply of timber to ensure sustainability of the entire timber value chain;

Overall goal for forestry

“to promote a thriving forest sector, to be utilised for the lasting benefit of the nation, and developed and managed to protect the environment”.

- Increase the contribution of all types of forests and related goods and services to the quality of life of South Africans, with a particular focus on rural and disadvantaged communities;
- Promote conservation of forest biological diversity, ecosystems and habitats, while promoting the fair and equitable distribution of their economic, social, health and environmental benefits;
- Facilitate skills development, awareness raising and information sharing with a view to enhance the profile of forestry as a sector;
- Implement innovative ways to enhance and streamline the regulatory environment to assist the sector to be compliant while reaching its potential in terms of sustainable development;
- Create enabling institutional and financial arrangements for sustainable forest management;
- Maintain the South African forest sector as a knowledge-based enterprise, adept at addressing constraints to growth in the sector and managing the risks to growth;
- Strengthen international and regional partnerships in order to enhance sustainable forest management; and
- Create an enabling environment for forest research in the country, including strengthening linkages with research and academic institutions, and with other SADC and NEPAD initiatives, as well as by encouraging participatory forest research in general.

White Paper on Marine Fisheries Policy for South Africa, 1997

The *Marine Fisheries Policy for South Africa* is based on the understanding that all natural marine living resources of South Africa, as well as the environment in which they exist and in which mariculture activities may occur, are a national asset and the heritage of all South Africans, and should be managed and developed for the benefit of present and future generations in the country as a whole. The policy is based on the following main objectives and principles:

- Optimisation of long-term social and economic benefits to the nation;
- Promotion of sustainable utilisation and the replenishment of living marine resources;
- Transparency and accountability in marine resource management;
- Fair and equitable access;
- Management of living marine resources based on the best available knowledge and multidisciplinary research within the context of sustainable utilisation;
- A holistic approach to fisheries and the utilisation of marine resources;
- National and provincial levels of management; and
- Participation in resource management.

The Marine Living Resources Act, 1998 (Act No. 18 of 1998) was promulgated to give effect to the provisions of the White Paper. A number of strategic and policy outputs have been developed subsequently, including:

- The General Policy on the Management and Allocation of Long-term Commercial Fishing Rights;
- Sector-specific policies for the allocation of long-term commercial fishing rights in 22 fisheries;
- A draft Small-Scale Fisheries Policy; and
- A Fisheries Performance Review.

Overall goal for fisheries

“to improve the overall contribution from the fishing industry to the long-term vision of Government as laid out in the Macro-Economic Strategy”.

Access to commercial fishing rights was significantly broadened by the long-term rights allocation process. However, the envisaged development of support structures for smallholder operators was not implemented and the depth of the reported transformation has been questioned. Although subsistence use of marine resources was recognised as important in South Africa, the importance of traditional small-scale fishing by communities (particularly along the east coast) was not recognised. In addition, overarching long-term policy for fisheries and fishery-specific management plans have not been developed.

2.2.3 Strategic papers and initiatives

Accelerated and Shared Growth Initiative for South Africa

The Accelerated and Shared Growth Initiative for South Africa (AsgiSA), 2006, and the National Industrial Policy Framework (NIPF), 2007, both emphasise the importance of promoting and developing small enterprise as a strategy to stimulate growth in the 2nd economy and for meeting the Millennium Development Goals.

The objective of AsgiSA was to attain a growth rate of at least 6% per annum by 2010. A growth diagnostic analysis was undertaken as part of the process and through the analysis, the following constraints to growth were identified (National Treasury, 2008):

- Volatility and level of the real exchange;
- The cost, efficiency and capacity of the national logistics system;
- Shortage of suitably skilled labour;
- Barriers to entry, limits to competition and limited new investment opportunities;
- The excessive regulatory burden on small and medium businesses; and
- Deficiencies in State organisations, capacity and leadership.

National Industrial Policy Framework

In January 2007, Cabinet adopted the National Industrial Policy Framework (NIPF), which sets out government's broad approach to industrialisation. Guided by the NIPF, the implementation of industrial policy was set out in an Industrial Policy Action Plan (IPAP). In August 2007, Cabinet approved the first 2007/08 IPAP, which reflected chiefly 'easy-to-do' actions. The 2007/08 IPAP has largely been implemented. However, there has been a growing recognition that industrial policy needs to be scaled up from 'easy-to-do' actions to interventions that government 'needs-to-do' to generate a structurally sound new path of industrialisation. A process of intensive consultation and analysis has culminated in a revised IPAP for the period 2010/11 through 2012/13, with the idea of updating on an annual basis. The 2010/11–2012/13 IPAP represents a significant step forward in industrial policy efforts. The agriculture, forestry and fisheries sectors' deliverables are included in the 2010/11–2012/13 IPAP, the fulfilment of which is expected to contribute towards growth and development. These require inter-governmental cooperation and coordination.

Medium Term Strategic Framework (MTSF)

The 4th democratic elections ushered in a new electoral mandate which defines the strategic objectives and targets of government for the period 2009–2014. These objectives and targets are outlined in the Medium Term Strategic Framework (MTSF) document, adopted in July 2009, hence the 'MTSF priorities'. The MTSF priorities build on the successes of 15 years of democracy. During the January 2010 Lekgotla the government decided that in order to translate the MTSF priorities into measurable deliverables, there is a need to concretise planning and policy-making in relation to measurable outcomes. Government therefore introduced the Outcome-Based Performance Management (OBPM) System. The OBPM System outlines 12 key outcomes, which are aligned to the 10 MTSF priorities.

Table 6: Alignment of MTSF priorities and key outcomes

MTSF priorities	Key outcomes
Speed up economic growth and transform the economy to create decent work and sustainable livelihoods	Decent employment through inclusive economic growth (4)
Massive programme to build economic and social infrastructure	An efficient, competitive and responsive economic infrastructure network (6)
Comprehensive rural development strategy linked to land and agrarian reform and food security	Vibrant, equitable, sustainable rural communities contributing towards food security for all (7)
Strengthen the skills and human resource base	Skilled and capable workforce to support an inclusive growth path (5) Quality basic education (1)
Improve the health profile of society	A long and healthy life for all South Africans (2)
Intensify the fight against crime and corruption	All people in South Africa are and feel safe (3)
Build cohesive, caring and sustainable communities	An efficient, effective and development-oriented public service and an empowered, fair and inclusive citizenship (12) Sustainable human settlements and improved quality of household life (8)
Pursue regional development, African advancement and enhanced international co-operation	Create a better South Africa, a better Africa and better world (11)
Sustainable resource management and use	Protect and enhance our environmental assets and natural resources (10)
Build a developmental state including improvement of public services and strengthening democratic institutions	An efficient, effective and development-oriented public service and an empowered, fair and inclusive citizenship (12) Responsive, accountable, effective and efficient Local Government System (9)

Ministers of each government department signed Service Delivery Agreements (SDAs) with the President for their term of office. The SDAs outline which outcomes each Minister will be responsible for delivering on, and how to achieve the targets as outlined. The Minister for Agriculture, Forestry and Fisheries will be directly responsible for three outcomes and indirectly contribute to five as indicated in Table 7 below.

It must be noted that the OBPM system is not prescriptive as to how departments and their respective sectors will implement the outcomes, but seeks to increase focus on high priority areas and effective monitoring of implementation thereof.

Table 7: Key outcomes to which DAFF must contribute

Direct contribution	Indirect and/or supporting
Outcome 4: Decent employment through inclusive economic growth	Outcome 5: Skilled and capable workforce to support and inclusive growth path
Outcome 7: Vibrant, equitable, sustainable rural communities contributing towards food security for all	Outcome 8: Sustainable human settlements and improved quality of household life
Outcome 10: Protect and enhance our environmental assets and natural resources	Outcome 11: Create a better South Africa, a better Africa and a better world

Market and trade policies

One of the major policies impacting South Africa's agriculture, forestry and fisheries sectors has been the progressive deregulation of markets since the 1990s. This market deregulation process went hand-in-hand with another process, namely foreign trade liberalisation, which had already started prior to the new democratic dispensation

as South Africa sought to fulfil its commitments under the World Trade Organisation's Agreement on Agriculture of 1994. Furthermore, at around the same time, a wide range of other instruments used to subsidise agricultural production among commercial farmers, such as fixed improvements, conservation works, fencing and emergency relief, were removed (Committee to Review the Agricultural Marketing Environment, 2006).

Openness to trade has long been seen as an important element of sound economic policy towards economic growth and the alleviation of poverty. The question, however, is how strong a force trade liberalisation is in economic growth, and how economic growth transmits such benefits to the poor. While there seems to be consensus amongst growth and development economists that economic growth will, in general, lead to increases in income, there is growing evidence that suggests that high levels of inequality hamper the pace at which an economy can benefit from liberalisation, which means that growth on its own cannot be an adequate antidote to inequality (Wagle, 2007).

While the impact of trade liberalisation on food security in South Africa remains uncertain, increasing trade remains a priority, and there are several challenges that the industry faces to fully realise its export potential. One challenge, for example, is the poor state of market intelligence on international agricultural markets; another is the absence of effective trade promotion strategies; and a third is the persistence of high tariff barriers to agricultural imports among some of South Africa's major trading partners.

The composition and direction of trade is not optimal. Issues to consider include:

- South Africa's positioning in Africa (i.e. Africa requires special interventions, for example, to mitigate trade risks, standardise Non-Tariff Measures where policy space allows, etc.) given the opportunities that exist, but also the lack of capacity on trade issues in Africa.
- Redirecting trade to new and possibly more sustainable markets, e.g. Asia. Innovative interventions are required to capitalize on the opportunities that exist. In this regard Public-Private Partnerships are vitally important, as well as closer cooperation between relevant government departments and parastatals.

It is imperative that more emphasis is put on the potential impact of bilateral trade agreements since it has implications for policy space and South Africa's future trade direction.

Land reform policy

Rooted in the RDP, the White Paper on South African Land Policy of 1997 set the foundation for one of South Africa's major post-apartheid programmes, namely land reform. The White Paper confirmed the three major elements of the land reform programme:

1. **Redistribution**, through which citizens can apply for assistance to acquire or access land for farming and/or settlement;
2. **Restitution**, involving the restoration of land, or cash compensation, to victims of forced removals, and operating under the Restitution of Land Rights Act (Act No. 22 of 1994); and
3. **Tenure reform**, aimed at improving tenure security of all South Africans and to accommodate diverse forms of land tenure, including types of communal tenure.

Land reform has enabled the broadening of access to land and participation in agriculture and forestry. Different approaches have been adopted and modified over time, especially in terms of the redistribution component. The first period of land redistribution (1994-1999) focused on acquiring farmland on behalf of groups of previously disadvantaged people, which they typically held through communal property associations. Often these projects received limited support for production, but were also compromised by unworkable plans involving group production. The second period of land reform (2001-2006) focused on redistribution of commercial farms to individuals and small groups. The third period of land reform (2006-present) saw the introduction of a proactive approach to land acquisition, enabling the State to purchase land and then allocate it on a leasehold basis to farmers.

By means of these policy adjustments, redistribution projects have become more successful in terms of production. However, as the amount of support per individual has risen, the number of different individuals benefitting has declined to the point where redistribution is scarcely able to address the land needs of smallholders who might like to 'graduate' out of the former homelands.

Land restitution has changed far less than redistribution, though there are some notable developments, for example, an increase in resources made available to support post-settlement support, and the testing of various partnership approaches. As for tenure reform, while the situation of labour tenants and farm dwellers have been partially addressed by targeted legislation, reforms applicable to the former homelands remain elusive. This constitutes arguably the biggest obstacle to unlocking the agricultural potential of the former homelands, where most black farmers are situated, often side-by-side with large amounts of under-utilised arable land.

DAFF is also involved, together with other national departments, in a number of initiatives that are geared to improving opportunities and well being for the rural poor. These include the Integrated and Sustainable Rural Development Strategy that is co-ordinated in the President's office, as well as the Land Reform Programme of the Department of Rural Development and Land Reform that involves land redistribution, restitution, and tenure reform, to facilitate the landless and those who have been removed or prevented from acquiring land under the former dispensation.

A key land reform challenge that impacts on both the forestry and agriculture sectors is that of providing 'pre- and post-settlement support' to land reform beneficiaries. To address this deficiency the Land and Agrarian Reform Project (LARP) was launched in February 2008 as a joint initiative between the current Departments of Rural Development and Land Reform (DRDLR) and Agriculture, Forestry and Fisheries. DRDLR designs and monitors the impact of the LARP and other land reform policies. A key objective of LARP is to integrate the implementation of the Comprehensive Agricultural Support Programme (CASP) and the Land Redistribution for Agricultural Development Programme (LRAD).

Lacking a comprehensive approach to changing demands and providing an enabling environment in which smallholder and subsistence farmers could develop into viable commercial enterprises, the Comprehensive Agricultural Support Programme (CASP) was established in 2004. The function of this programme is to support new farmers. CASP is relevant in the context of the development of the agriculture and forestry sectors as it could be applied to emerging farmers and forestry growers now that forestry and agriculture have been combined into a single department. The LARP proposes the establishment of 'one-stop shop' service centres located close to farming and rural beneficiaries. This concept is in line with the concept of creating 'integrated access points' for SMMEs as presented in DTI's Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprises. However it is not clear at this stage how the 'one-stop shop' interventions proposed by LARP will fit into the integrated access points proposed by DTI, or what the implications are for the roll-out of SMME services in agriculture and forestry.

In terms of support to smallholder farmers, Aliber & Hall (2010) found that between 50 and 200 black farming households receive over R500 000 each per annum; approximately 350 000 receive R17 000, while 2,3 million households are receiving almost nothing. There is therefore an imbalance between relatively large amounts of support to rather few "new farmers" in poorly conceptualized land reform projects, at the expense of many existing black farmers within the ex-Bantustans (Aliber & Hall, 2010). Aliber & Hall (2010) recommended that available resources be used in more effective ways and that the emphasis in CASP shift from on-farm infrastructure and inputs to community-level infrastructure, market development and institutional re-engineering.

Comprehensive Rural Development Programme (CRDP)

Following the 2009 elections, the government recommitted itself to intensifying its rural development efforts through the establishment of a new Department of Rural Development and Land Reform (DRDLR). DRDLR has been given the mandate to develop a Comprehensive Rural Development Programme (CRDP) throughout the

country. The intention is to use this programme to promote rural development on the one hand, and land and agrarian reform on the other, in a manner that is mutually supportive.

The CRDP is aimed at being an effective response against poverty and food insecurity by maximizing the use and management of natural resources to create vibrant, equitable and sustainable rural communities. The programme must improve the standard of living and welfare, rectify past injustices through rights-based interventions, and address skewed patterns of distribution and ownership of wealth and assets. The strategic objective of the CRDP is therefore to facilitate integrated development and social cohesion through participatory approaches in partnership with all sectors of society.

This IGDP needs to obtain maximum leverage from the opportunities created through the CRDP. Coordination between DRDLR and DAFF will be critical to ensure the success of the CRDP.

Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprises, 2005

A key policy directive to be taken into consideration in the development of small-scale entrepreneurs in the agriculture, forestry and fisheries sectors is the DTI's *Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprises*, which was approved by Cabinet in 2005. This Strategy follows on and updates the *White Paper on National Strategy for the Development and Promotion of Small Business in South Africa* (1995), which laid the foundation for the promotion of small enterprise in South Africa. It identifies the small enterprise sector as a key driver of development in post-1994 South Africa.

The 2005 Strategy works from the premise that much is already known and accepted of *what* should be done to support small enterprise development, and that the main challenge is *how* this support should be structured and rolled out. The strategy emphasises the importance of a cooperative and integrated approach to service delivery involving all spheres of government and the private sector. The strategy calls for steps to co-locate as many small enterprise support agencies as possible, in order to create integrated access points for existing and aspiring entrepreneurs. Finally, the strategy recognises the need for sector strategies that focus on small enterprise development for priority sectors, and proposes that programmes be developed after thorough examination of the support needs of small business in those sectors. It also states that individual departments within each sector will play a key role in leading the conceptualisation and design of sector-specific support programmes.

Livelihoods Development Support Programme

The Farmer Settlement Programme (FSP), which was responsible for post-settlement agricultural support to land reform beneficiaries, had no dedicated budget until 2004. The FSP, now renamed the Livelihoods Development Support Programme, has limited reach and impact, rather than being a mechanism for restructuring the economic and market environment for smallholder and subsistence farmers (National Treasury, 2007; Hall, 2009). Recently, an evaluation of the implementation of the 2001 Sector Plan, which assessed the extent to which the intended objectives and outcomes had been realised over the past five years, was conducted (Vink et al., 2008). The performance scorecard suggested that good progress was made in some areas, such as sustainable resource management, while other areas, such as equitable access and participation, still required urgent attention (Vink & Kirsten, 2002).

Although all strategies devised by the department since 1995 state the importance of support for the commercial and smallholder farmers (smallholder and subsistence), currently they receive less support from the state than their counterparts in every industrial country in the world with the exception of New Zealand (Vink et al., 2008). Direct support to agriculture, as measured by the Organisation for Economic Cooperation and Development (OECD), is expressed as a percentage of gross farming income (NAMC, 2008). This is referred to as the Producer Support Estimate (PSE), and was as follows for the period of 2005 to 2007: Chile (4%), Brazil (6%), South Africa (6%), China (9%), Ukraine (9%) and Russia (14%) (NAMC, 2008). The level of support offered to producers is considerably lower than the OECD average of 26% (NAMC, 2008).

Second Economy Strategy Project (SESP)

This initiative of the Presidency, hosted by Trade and Industrial Policy Strategies (TIPS), provides a framework for addressing inequality and economic marginalisation in South Africa. It specifically notes:

- “The centralised, monopoly structure of SA’s core economy – including the labour market legacies of pass laws, as well as the highly skewed distribution of assets such as land and capital;
- The spatial legacy of Bantustans and apartheid cities; and
- The legacies of deep inequality in the development of human capital” (SESP, 2009a).

In response to these features of a dualistic economy, the SESP framework presents a strategy for promoting structural change to create a more broad-based economy. It emphasises the need to improve “the distribution of returns from economic activity more equitably across the society” (SESP, 2009a: 2). A top priority is therefore to improve the situation of subsistence or poor farmers, mostly in the former Bantustan areas who, despite engaging in productive work, derive too little benefit from it. It notes that “strategies to develop a smallholder sector and strengthen subsistence agriculture face many challenges and start off a low base: but their potential impact on poverty and on rural employment makes this investment – and the associated risk – imperative” (SESP, 2009a: 9).

The SESP framework proposes a departure from the implementation of transformation programmes that require implementation at a project level in favour of interventions by the State that achieve systemic, societal-level impact. Instead of relying wholly on delivering project-level support to individual farmers or projects, and in line with the notion of a ‘developmental state’, government will need to reshape markets to achieve wider changes in the market environment in which small producers are often marginalised.

A first set of required state interventions includes the provision of a combination of incentives and regulation of the commercial sector, particularly the large companies that dominate agricultural value chains. The purpose of such incentives and regulation is to ensure that large businesses have to increase the proportion of small producers among their clients, and engage with them on more equitable terms.

A second set of required state interventions is to promote co-ordination and co-operation between small producers themselves, through input supply and marketing cooperatives, to overcome the coordination problems that isolate small producers and to strengthen their leverage in engaging with larger market players. These two sets of interventions are critical to achieving the economies of scale associated with marketing.

Agricultural Broad-Based Black Economic Empowerment (AgriBEE)

As the name implies, Agricultural Broad-Based Black Economic Empowerment (or ‘AgriBEE’), encapsulates the agricultural sector’s approach to Broad-Based Black Economic Empowerment. AgriBEE seeks to complement other initiatives such as farmer development support and land reform, by incentivising the sector to integrate black people in different ways (e.g. equity owners, managers, etc.) and at different points in the agricultural value chain, broadly speaking. The AgriBEE Transformation Charter was gazetted in March 2008, and the AgriBEE Charter council was inaugurated in December 2008. The mandate of the Council is, *inter alia*, to align the AgriBEE Charter with the Codes of Good Practise in terms of Section 9 of the Broad-Based Black Economic Empowerment Act, Act No. 53 of 2003.

While the rationale for AgriBEE is clear enough, to date it appears to have had little impact because it is not enforceable, i.e. the charter is not legally binding, and only indicative scorecards are in place. DAFF is therefore in the process of consulting DTI in order to have Sector Codes published in terms of Section 9 of the Act, which will allow DAFF to apply binding Sector Codes.

Forest Sector Transformation Charter, 2009

This charter was developed by sector stakeholders over a period of two years and was gazetted as Sector Codes, in terms of Section 9(1) of the Broad-Based Black Empowerment (B-BBEE) Act in May 2009. The Charter highlights the need for SMME development “in underpinning economic growth and ensuring that black economic empowerment is broad-based”.

The charter contains a number of undertakings by government and industry for creating an enabling environment for SMME development in the forest sector (see Box below). Many of these undertakings reiterate and further detail the initiatives already identified in the draft *Strategy Framework for Forestry Enterprise Development*. The charter also commits enterprises in the forest sector to support B-BBEE and SMME development through procurement and enterprise spending.

Overall, the charter sees both government and industry as having an important role to play in supporting emerging black entrepreneurs in the forest sector. The charter proposes doing, not by creating new delivery structures, but by strengthening existing delivery structures in both the corporate sector and public sector. This approach is in line with what is being proposed in the *Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprises*, which is discussed above.

Competition Act

The new South African competition law forms an important part of reforms designed to both address the country's historical economic structure and encourage broad-based economic growth. Addressing the trend towards increasing concentration in agriculture, forestry and fisheries requires robust application of competition policy, although this is unlikely to be sufficient on its own. The objectives of such an intervention must encourage free and fair competition, prevent the concentration of economic power and thereby promote 'balanced development' within agriculture, forestry and fisheries.

Box 1. Forestry BBBEE charter undertakings

Ownership

- 8.2.1 Funding facility for B-BBEE transaction
- 8.2.2 Restructuring of State forest assets in support of B-BBEE targets

Skills Development

- 11.2.1 Sector Skills Plan for the Forest Sector

Enterprise Development

- 13.2.1 Access to funds and financial services for emerging black entrepreneurs.
- 13.2.2 Capacity building and business support for emerging black entrepreneurs
- 13.2.3 Expedite the authorisation process for afforestation & paper and sawmilling facilities
- 13.2.4 Secure land right and land holding structures on communal land for new afforestation and restructuring of state forest assets
- 13.2.5 Small grower certification
- 13.2.6 Access to raw material supply for smallholder charcoal producers and domestic fuelwood

Industry Specific Initiatives

- 15.2.1 Integrated planning for forest sector development
- 15.2.2 Sawlog growing strategy and programme for South Africa
- 15.2.3 Forestry protection services
- 15.2.4 Transport infrastructure development in support of forestry
- 15.2.5 Anti-dumping measures
- 15.2.6 Strategy and programme for forest sector R&D in South Africa
- 15.2.7 Expedite restitution claims on forest land
- 15.2.9 Review of levying of property rates in the forest areas

2.2.4 Regional policies and programmes

NEPAD and CAADP

South Africa as a member of the African Union subscribes to its programmes, the key one being the New Partnership for Africa's Development (NEPAD) and its Comprehensive Africa Agricultural Development Programme (CAADP). It is also a signatory of the Maputo Declaration, which requires countries to commit at least 10% of their budgets to agriculture. Engagements with the NEPAD Secretariat are underway to design the process according to which South Africa will implement CAADP.

SADC trade protocol

In August 1996 a new political and economic environment emerged within southern African when the SADC Protocol on Trade – also known as the Maseru Protocol – was adopted. The aim of the Protocol on Trade is to liberalise 85% of intra-SADC trade, paving the way for the SADC Free Trade Area (FTA). The FTA was launched in August 2008. Under the FTA, member states liberalise trade through removing tariffs and non-tariff barriers. South Africa has fully implemented the Trade Protocol. Currently 99% of imports from SADC into the South African market are free of customs duties.

SADC protocol on forestry

The protocol is applicable to all activities relating to development, conservation, sustainable management and utilisation of all types of forests and trees, and trade in forest products throughout the SADC region. The main objectives of the protocol are to:

- promote the development, conservation, sustainable management and utilisation of all types of forests and trees;
- promote trade in forest products throughout the region in order to alleviate poverty and generate economic opportunities for the peoples of the region; and
- achieve effective protection of the environment, and thereby safeguard the interests of both the present and future generations.

The challenge in terms of the forestry protocol remains the slow progress towards ratification by SADC member countries. It therefore remains an unexploited mechanism for strengthening regional collaboration.

SADC protocol on fisheries

The objective of this protocol is to promote responsible and sustainable use of the living aquatic resources and aquatic ecosystems of interest to State parties in order to:

- promote and enhance food security and human health;
- safeguard the livelihood of fishing communities;
- generate economic opportunities for nationals in the region;
- ensure that future generations benefit from these renewable resources; and
- alleviate poverty with the ultimate objective of its eradication.

Other regional fisheries programmes include:

- The Benguela Current Commission, comprising South Africa, Namibia and Angola;
- The International Commission for Conservation of Atlantic Tunas (ICCAT);
- The Indian Ocean Tuna Commission (IOTC);
- The South West Indian Ocean Fisheries Commission (SWIOFC);
- The Convention on the Conservation of Antarctic Marine Living Resources (CAMMLR); and
- The South East Atlantic Fisheries Organization (SEAFO).

Other SADC protocols, agreements and programmes

There are a number of other protocols, programmes and agreements that South Africa has entered into or participates in, in the context of SADC regional integration. The following are some of the key ones:

- SADC Fire Management Action Plan;
- Revised Protocol on Shared Watercourse Systems;
- SADC Sugar Protocol;
- SADC Protocol on Inland Fisheries;
- Draft Protocol on Management of Farm Animal Genetic Resources;
- Seed Security Network;
- SADC Plant Genetic Resources Centre (SPGRC) Long Term Sustainability Strategy;
- SADC Programme on Conservation and Sustainable Use of Plant and Genetic Resources for Food and Agriculture;
- Livestock Information Management System (LIMS);
- Regional Plan for Avian Influenza Contingencies;
- Harmonisation of sanitary and phytosanitary requirements; and
- Conservation Agriculture Regional Working Group (CARWG).

The southern African Customs Union (SACU)

SACU consists of Botswana, Lesotho, Namibia, South Africa and Swaziland and was established in 1910, with its primary aim being to promote economic development among its members through regional coordination of trade. SACU has successfully negotiated trade agreements with the European Union (EU) and SADC, among others. Since all members of SACU are also members of SADC, questions remain about the future of SACU, given SADC's long-term targets to become a Customs Union.

2.2.5 Conclusion – policy framework

In conclusion, it seems that despite the above-mentioned policies, strategies, programmes and agreements, government at this stage lacks policy through which an economic and market environment can be provided for the transformation of South Africa's agricultural, forestry and fisheries sectors, whilst maintaining productivity and production efficiency for purposes of ensuring national food security and a robust trade balance. Furthermore, uncoordinated implementation and planning by government has frustrated the effective implementation of government strategy, with each programme designing its own implementation plan, leaving a fragmented scattering of projects across South Africa's landscape.

The realisation of the change government aims to effect through its strategies critically depends on its ability to translate strategic objectives into effective implementation plans, supported by monitoring and evaluation systems. The poor performance of South Africa's strategic plans and policies may not lie entirely or even mainly in their content, but in the lack of effective implementation, continuous monitoring and evaluation of progress made, and resultant corrective action. More important is the disjointed implementation of government policies and strategies. Cooperative governance requires effective management across all three spheres of government, sector organisations, and producers. Without an integrated approach and effective management of actions, roles and responsibilities, most strategies devised by DAFF will result in ineffective implementation.

In terms of transformation and equity interventions and initiatives, the focus in agriculture in particular has been skewed towards new entrants, especially linked to the land reform programme, while inadequate support has been given to existing participants in the sector who are marginalised. There is therefore a need to correct this imbalance, for example by effecting changes that will facilitate existing smallholders' gainful access to markets, by focusing less on primary co-operatives and more on secondary (e.g. marketing) co-operatives; and to improve the quality and accessibility of support systems and infrastructure in order that larger numbers of producers may benefit.

To date, therefore, South Africa's policies and strategies have not succeeded in providing effective support on a meaningful scale for smallholders and subsistence producers.

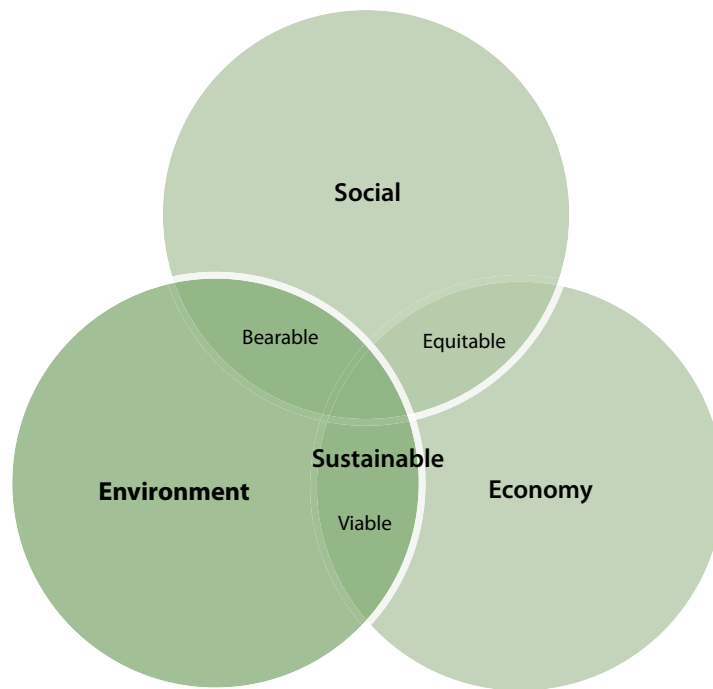


Figure 8: The three pillars of sustainable development (IUCN, 2006)

All the existing policies, and the three MTSF priorities to which the sectors need to contribute, are geared towards the social, economic and environment pillars of sustainable development, as depicted in Figure 8 (IUCN, 2006). For the agriculture, forestry and fisheries sectors, these pillars can be refined as follows:

- **Social pillar**, for which the key challenges are **equity and transformation**, implying equitable access to and participation in agricultural, forestry and fisheries opportunities, so as to unlock the full entrepreneurial potential in the sector, and to achieve social stability by means of de-racialising land and enterprise ownership.
- **Economic pillar**, for which the key challenges are **growth and competitiveness**, implying enhanced profitability through sustained global competitiveness in the sector's input supply, primary production, and agro-processing industries.
- **Environment pillar**, implying the **sustainable use of natural resources** by means of the careful management of natural resources for the benefit of current and future generations.

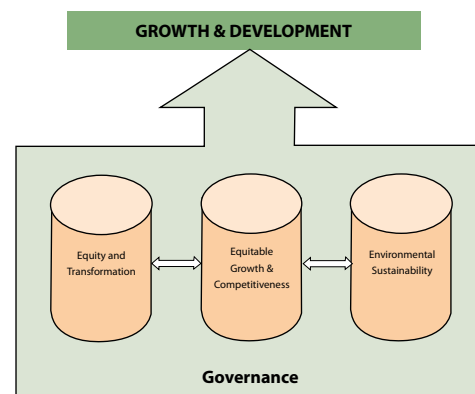
Thus the way forward identified by the IGDP is to redouble efforts to ensure the coordinated and effective implementation of these pillars as relevant to the needs of the agriculture, forestry and fisheries sectors. This implies a fourth major element itself, namely good governance. Underpinning the three pillars or focus areas, is the need for an effective and efficient governance system, not least a governance system that provides for integrated planning, and monitoring and evaluation across the sector and the various spheres of government.

3 Current realities and challenges

South Africa's policy framework aims to address major national challenges such as poverty reduction and food security, through addressing the pillars described above. The agriculture, forestry and fisheries sectors provide many opportunities and have the potential to contribute significantly to the achievement of government priorities and outcomes. There are however a number of challenges or constraints that should be addressed to enable the sector to reach its full potential (Figure 9).

Key challenges to be addressed can be summarised into the pillars of the IGDP:

- Equity and transformation;
- Equitable growth and competitiveness; and
- Environmental sustainability.



In addition, as will be argued below, governance is seen as an additional key challenge which is fundamental to identifying and implementing the interventions necessary to meeting the various challenges.

The key challenges and their main causal factors are summarised in the problem tree below. In the rest of this section, these key challenges, which are common to agriculture, forestry and fisheries, are reflected upon with a view to identifying interventions that will address them.

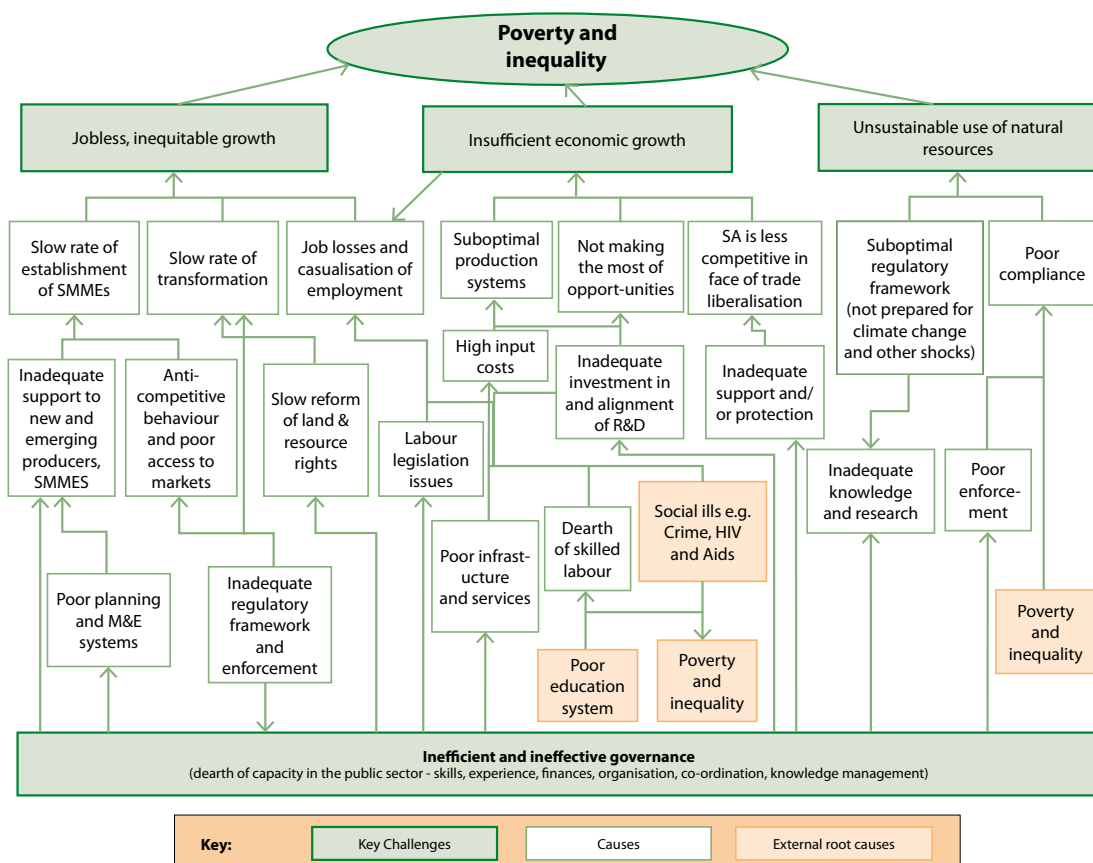


Figure 9: Problem tree analysing challenges faced within the sectors

3.1 Equity and transformation

3.1.1 Rationale

Equity and transformation are interrelated topics. Equity refers to fairness and equal outcomes in terms of gender, race and class. Transformation is a process of profound change that should result in a new direction to a different level of effectiveness and where everyone contributes to shared outcomes. In the absence of a visible process of transformation, equity cannot be reached.

The skewed interpretation that transformation is about the 'blackness' of a company, does not address economic and gender inequality, and disability issues. More importantly, the emphasis on 'blackness' trivialises the challenge of transformation by abstracting from whether the action or sector is achieving its potential in terms of addressing poverty and marginalisation; an example is the manner in which 'transformation' in agriculture, forestry and fisheries has tended to only benefit a small, token number of black entrepreneurs. Another dimension of the trivialisation of 'transformation' is that it often hides an underlying assumption that the objective of an intervention is to assist a previously disadvantaged farmer or forester or fisher, to more closely resemble their large-scale advantaged counterparts. Transformation is not merely raising everyone to the same 'level', but in many cases redefining what is normal or worthwhile, indeed transforming the structure of the sector or how it functions.

The challenge the sectors face in terms of equity includes skewed and insufficient levels of transformation regarding broad-based black economic empowerment, equity in terms of access to markets, information and sufficient support provided at required scales and sufficient levels.

3.1.2 Problems and causal factors

Growth in the sector has not been accompanied by concomitant increases in transformation or employment. The AgriBEE and Forest Sector Charters provide for transformation in the sector, while the land reform and redistribution process also provides for the redistribution of land in terms of ownership. At the same time, policies have attempted to broaden participation in the fisheries subsector. Despite various instruments, strategies and programmes developed specifically to address transformation, the sectors continue to wrestle with entrenched inequalities and to effectively address transformation (Parusel & Vieg, 2009; Hall & Aliber, 2010). Furthermore, poverty and food insecurity remain unabated and in some cases worse than before.

Inadequate support to smallholder and subsistence farmers, small growers, and small-scale fishers

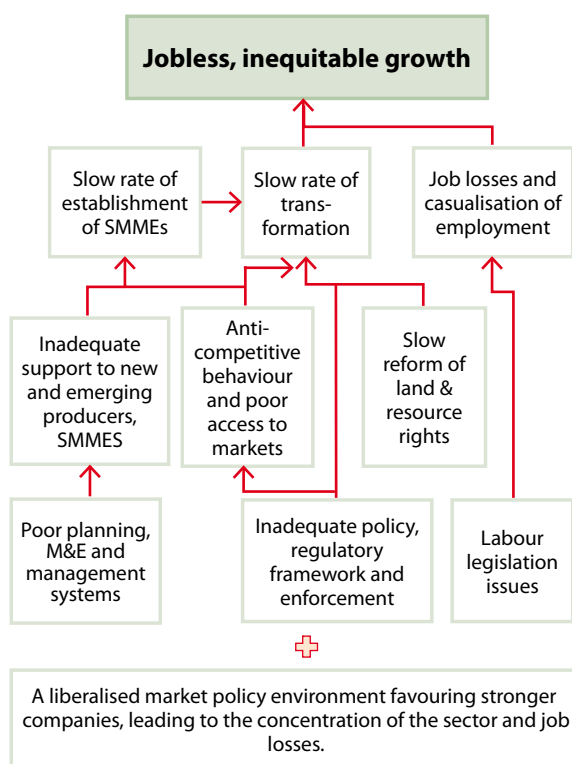
Factors such as the lack of access to land, water, markets, finance, communications infrastructure, education and skills training, still prevent marginalised South Africans from making substantive progress in primary farming, forestry and fisheries, as well as in upstream and downstream enterprises associated with them. These are some of the factors that gave way to a cycle of skills deficit, crushing poverty, underdeveloped markets, low rates of public and private sector investment and a lack of infrastructure, reinforcing the cycle by impacting on the ability of black communities to engage in meaningful rural-based economic activities. Broad-based black economic empowerment and land reform initiatives are regarded as vitally important catalysts to address these imbalances (FIP, 2006).

Most national programmes explicitly targeting the so-called second economy within agriculture, forestry and fisheries, with the expected outcome of transforming the sector and building equity, fall short because they were not designed to impact at the scale required to make a difference at a socioeconomic level, and they have acted in isolation of each other, leaving beneficiaries seeking support from a fragmented array of projects and programmes. As a result, they have benefitted relatively few people, without addressing the structural and systemic challenges that perpetuate inequality along racial divides within these sectors.

There is a lack of capacity within government and state-owned enterprises to reach and offer efficient and sufficient support, limiting their scope to achieve the scale required. In agriculture, there has been a significant growth in budgets to provide direct support to black and disadvantaged smallholder farmers in the form of grants for infrastructure, production inputs and other items, and recently through an extension service recovery programme (Hall and Aliber, 2010). However, these interventions have not been far-reaching. The Comprehensive Agricultural Support Programme (CASP), the Micro Agricultural Financial Institutional Scheme of South Africa (MAFISA), and extension services, averaging over the period 2005/06 through 2008/09, collectively absorbed about 58% of total provincial expenditure. During that period, there were about 61 000 beneficiaries per year under CASP (mostly land reform beneficiaries), and about 2 500 loan recipients via MAFISA. According to the Stats SA 1997 Rural Survey, only 11% of farmers in the former homelands had had contact with an extension officer within the previous 12 months (Hall & Aliber, 2010). Thus, in a given year, at most 13% of black farming households derived direct benefits from the provincial spending on these three interventions. This picture is corroborated by Stats SA's General Household Survey for 2009 and 2010. Unfortunately, similar data for the forestry and fisheries sectors is lacking.

This suggests that despite strong political and policy support for smallholder producers in South Africa, and significant increases in budgets dedicated to this over the past decade, the support currently rendered to smallholder producers in South Africa is not consistent with the visions of current policy and strategy. The lack of access to information and complex and unaffordable business transactional services, hamper the capacity of historically disadvantaged individuals to actively pursue the process of their own empowerment.

Meanwhile, these problems are being exacerbated by an increase in the consolidation of business and farming enterprises, with generally smaller commercial farmers and firms closing down or being taken over. As a result, between 1993 and 2007, the number of commercial farm units declined by a third, while just under half of the 83% of forest plantation area that is privately owned is owned by big corporations. A similar pattern exists in fisheries.



Jobless growth

The process of farm consolidation carries on despite the generally positive growth trend within agriculture – there is little reason to believe that consolidation is the *cause* of that growth. There appears to be a correlation between the consolidation process and the decline in the size of the agricultural labour force. This is in part a statistical correlation (i.e. comparing the 1993 and 2002 agricultural censuses, one observes a high correspondence between those districts with large amounts of consolidation and those with large drops in the numbers of farm workers), but there is also qualitative evidence to back it up (e.g. Simbi *et al.*, 2000). In other words, agriculture is characterised by jobless growth, and the continued structural change of sector in the same direction is cause for concern.

The distribution of income has grown more unequal within the agricultural sector, with 51% of all agricultural farms earning a gross income below R300 000 a year, while just eight agri-business companies have a turnover above R1 billion a year (Hall, 2009). Furthermore, a large number of jobs have been lost. There are also real concerns about the decline in permanent labour and the trend of increased casualisation of labour. Labour practices in the sector remain a concern.

In fisheries, although some fishing rights have been reallocated, most bona fide small-scale fishers have lost out, and SMMEs, which government expected would create employment, have struggled (Isaacs *et al.*, 2009). While the reallocation of rights would act to reduce poverty for the rights holders and entrepreneurs, the subsequent creation of jobs would only reduce poverty among those able to survive a robust, liberalised market. Government support programmes to SMMEs within the fishing industry are thus imperative (Isaacs *et al.*, 2009).

Effects of trade liberalisation on transformation and national food security

The liberalisation of agricultural and food markets was premised on the expectation that deregulated market outcomes would be more efficient and would increase access to all market participants, benefitting producers and consumers alike (Chabane *et al.*, 2008). However, this has not been the case. Liberalisation has not created a competitive market. At best, state intervention is replaced by private sector regulation (Rakhudu, 2009), which is a growing scenario within fisheries (Crosoer *et al.*, 2006).

The agriculture, forestry and fisheries sectors remain largely characterised by anti-competitive outcomes, including a high concentration of ownership as well as vertical integration by major firms. The overall picture is that of high concentration at each level of the supply chain, signifying oligopolistic structures (Rakhudu, 2009), especially among input-suppliers (e.g. seed, fertiliser, etc.) agro-processors.

The major agro-processing firms are largely those that dominated at the time of liberalisation, although some are privatised former co-operatives that have thrived particularly since liberalisation. At the same time, liberalisation has meant much greater volatility in the prices of agricultural products (Chabane *et al.*, 2008). The resulting increase in the risk of farming has prevented new entrants from being effective competitors, or has deterred them from entering in the first place. Similarly, the integration of South African fisheries into the global economy has operated as a powerful constraint on post-apartheid fisheries reform (Crosoer *et al.*, 2006).

It is apparent that South Africa's trade and market policies have only benefitted the commercial sector, leaving smallholder producers, and the small-scale fisheries sector, struggling with growing socio-economic inequalities (Naudé & Coetzee, 2004). Thus according to Rodrik (1998) and Mabugu & Chitiga (2007), trade policy on its own is an unreliable instrument for generating shared economic growth, and the efficiency consequences of trade reform pale in comparison to its negative distributive effects.

There are studies that indicate that the impact of trade liberalisation on food security is ambiguous (Bezemer & Headey, 2008). However, with or without trade reform, world food prices are expected to continue rising indefinitely (Collier & Dercon, 2006; Cotula, 2008; Demeke *et al.*, 2008), with dire consequences for poor households.

3.1.3 Types of interventions required

All three sectors are challenged by ineffective and insufficient levels of transformation due to minimum compliance, lack of enforcement and monitoring, and in some instances an absence of appropriate policies. As mentioned above, rendering AgriBEE more enforceable is one way of encouraging real change, and this is already being pursued. Along with improved enforcement, there is a need for improved support, and spending strategies, ensuring that government spending is a reflection of government policy and strategy for transformation. In order to fast track transformation within South Africa, systems and policies need to be put in place to enforce and ensure compliance amongst all parties.

As discussed in Altman *et al.* (2009), lessons from elsewhere in Africa suggest input support interventions targeting smallholders can boost production and food security, such as the Agricultural Input Support Programme (AISP) of Malawi, which has raised yields across a large number of staple foods produced by smallholder farmers. Higher yields further enabled more households to withstand or cope with food price shocks. Farming of urban food gardens appears to be on the increase, especially in sub-Saharan Africa, and since in South Africa, the pace

of urbanisation is not expected to slow down (Altman *et al.*, 2009). How this rising population of city dwellers accesses nutritionally adequate food is bound to become a major concern. Investigating the potential of urban farming to address food insecurity around the cities must be on the food policy agenda of South Africa. Education, resources, skills and support are furthermore crucial for ensuring household food security. The development and improvement of support services such as research and development, finance, extension, market access and infrastructure, is also needed.

The Green Paper currently being developed by the Department of Rural Development and Land Reform will address the challenges in terms of land reform. The IGDP however sees the need for agriculture, forestry and fisheries to support land reform, by creating an enabling environment for the sector to grow for the benefit of rural development.

3.2 Equitable Growth and Competitiveness

3.2.1 Rationale

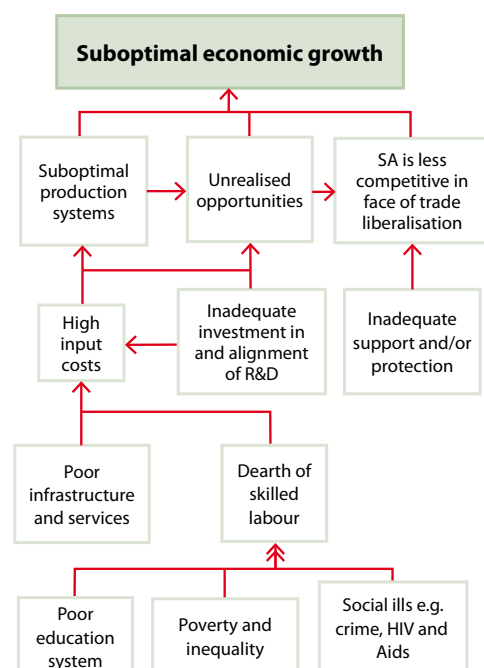
The second key challenge to be addressed in the sectors is growth and competitiveness. Economic prosperity is vital – though not sufficient – for addressing poverty and improving human wellbeing. The main challenge faced by these sectors is to contribute to economic growth and competitiveness while at the same time addressing equity and transformation, national food security and sustainability. This will require supporting the commercial sector while also increasing the contribution of smallholder and subsistence producers, increasing food production for domestic consumption as well as higher value and exports. The challenges faced will have to be addressed within the context of the economic outlook described in Box 2.

3.2.2 Problems and causal factors

The commercial sector has shown positive growth over the past two decades. For instance, between 1990 and 2009, field crop production increased by 13%, horticultural production by 62%, and animal products by 29%. Meanwhile, the export of forest products increased from R9,5 billion in 2001 to R12,2 billion in 2007.

However, several factors hinder the economic growth of agriculture, forestry and fisheries. Three important proximal factors are the slow progress in terms of increasing production efficiency, poor innovation systems, the slow rate of opening up new markets and value-adding opportunities, and the impacts of the former in conjunction with the effect of globalisation and free trade on South Africa's competitiveness in global markets.

In a survey on the competitiveness in the agriculture sector (ABC, 2008), the top three factors constraining the competitiveness of agribusinesses were found to be the cost of crime, the lack of trust in the political system in South Africa and the low level of competence of staff in the public sector (Table 8). These factors were the same as the preceding survey in 2004. Other factors have changed position. For example, electricity supply was



rated the fourth most constraining factor in 2008, as a result of the electricity crisis, whereas in 2004, electricity supply was regarded as enhancing the competitiveness of agribusiness. Ten of the top fifteen constraining factors in 2008 were exactly the same as in 2004. The three 'cost factors', namely the cost of transport, cost of finance and the overall cost of doing business in South Africa, as well as the 'lack of capacity' factors, namely electricity supply and the lack of sufficient scientific research capacity, were perceived to be more restrictive in 2008 compared to 2004. These factors will have a direct influence on the ability of agribusiness in South Africa to continue to sell their products at competitive prices and the future sustainability of the agricultural sector. It is also important to note that the average score for the top fifteen constraining factors in 2008 is much lower than the average score in 2004. This indicates that the constraining impact of these factors on the competitiveness of agribusinesses in South Africa is becoming more severe.

These findings are in line with the *Global Competitiveness Report* published by the World Economic Forum in 2007. In explaining South Africa's drop in global competitiveness rankings, the five most problematic factors for doing

Box 2. South Africa's economic outlook

The year 2009 was a hard one throughout the world where most countries experienced the economic downswing. However, the world economy is currently showing signs of recovery, with world average real GDP growth forecast at over 2% in 2010. A positive outlook for inflation is also forecast between 2010 and 2014 for both the world and South Africa. Expansionary policies have been applied by central banks around the world (including South Africa's Reserve Bank), which saw interest rates decrease in a bid to stimulate the economy out of the recent recession. However, global interest rates are forecast to be on the rise again. For South Africa, interest rates are set to go up and to stabilise in lower double digits over the next five years.

The Rand is forecast to weaken against major currencies by 2014, following a short period of appreciation. Major agricultural exports such as wine are forecast to be on the upward trend, assisted partly by a weakening Rand over the next five years. Prices of major agricultural commodities are projected to be on a gentle rise over the same period. Employment is forecast to grow, following economic recovery, leading to growth in personal disposable incomes. These forecasts are discussed in more detail below.

In terms of economic growth, it is forecasted that from the current negative growth of -1,9% and -1,8%, the growth in the real GDP for the world and for South Africa is forecast to average 2,9% and 2,4% in 2010, respectively. It is anticipated that South Africa's real GDP will grow more than the world average between 2010 and 2019, albeit remaining around 5% during the period before 2018 (FAPRI, 2010). The country's goal of growing the economy more than 5% may therefore not be achieved with ease.

The world's Consumer Price Index is forecast to peak at 3,7% in 2010 and subsequently this rate will decrease to 3% in 2011, after which it will stay flat at 2,9% until 2014 (EIU, 2010; IMF, 2010). By the year 2009 South Africa's Consumer Price Index inflation had gone down to an average of 7,2% and the Economic Intelligent Unit (EIU) forecast that it will average 5,9% in 2010 and decrease to 4% in 2014, which is a positive outlook for the consumer (EIU, 2010).

The Bureau of Economic Research (BER) forecasts the 2010 nominal and real prime interest rates to average 10,12% and 4,8%, respectively (BER, 2010). The two rates will increase to average 12% and 6,5% in 2015, respectively. In order to stimulate the economy following the economic recession, the Reserve Bank opted for expansionary monetary policy, bringing the interest rate to its lowest levels in nearly 30 years. The BER forecasts the repo rate to average 6,5% in 2010, then rising slightly to average 7% in 2011 and fluctuating between 6% and 7% between 2011 and 2015 (BER, 2010).

The BER furthermore indicates that the Rand will continue to recover against the US Dollar and the Euro. The BER indicates that from the average of R8,4/US\$ in 2009, the Rand will appreciate to average R7,6/US\$ in 2010. However, it will start depreciating to reach an average value of R9,5/US\$ in 2014. After the average of R11,7/Euro in 2009, the Rand would have appreciated to reach R10,4/Euro in 2010. It will also lose value against Euro to reach R13,5/Euro in 2014.

Following economic recovery, South Africa's rate of employment growth will increase from 0,7% in 2010 to reach 2,1% in 2011 (BER, 2010). The rate of employment growth will slow down between 2011 and 2014 and in 2014 the rate will stay unchanged from the 2,1% forecast for 2011 (BER, 2010). The increase in the real personal disposable income will rise in a similar pattern to that of employment. From the increase rate of 8%, the change in the real personal disposable income will accelerate to 10% in 2014 and between 2010 and 2014; growth in the wage rate will decrease from a high of 8,1% to average 7,5% (BER, 2010).

business in South Africa were indentified to be: crime and theft, inefficient government bureaucracy, inadequately educated workforce, restrictive labour regulations and inadequate supply of infrastructure.

The factors affecting the competitiveness of the agricultural subsector are probably equally applicable to the forestry and fisheries sectors.

Table 8: Major constraints to the competitiveness of agribusinesses in South Africa, 2008 and 2004

2008		2004	
Factors	Score	Factors	Score
1) Cost of crime	1,57	1) Cost of crime	1,80
2) Trust in the political systems	1,66	2) Competence of personnel in public sector	1,80
3) Competence of personnel in public sector	1,70	3) Trust in the political systems	1,87
4) Electricity supply in SA	1,71	4) Strong Rand (R6/US\$)	2,55
5) Availability of skilled labour	2,15	5) South Africa's labour policy	2,60
6) Cost of transport	2,20	6) Administrative regulations	2,72
7) Cost of finance	2,51	7) Aids	2,85
8) Aids	2,59	8) Difficulty to start a new business	2,93
9) South Africa's labour policy	2,64	9) South Africa's land reform policy	2,97
10) Cost of quality technology	2,64	10) Availability of skilled labour	3,0
11) Quality of unskilled labour	2,75	11) Impact of tax system on investment	3,05
12) South Africa's land reform policy	2,78	12) Developments in Zimbabwe	3,33
13) Administrative regulations	2,80	13) The cost of quality technology	3,39
14) Lack of scientific research institutions in the agribusiness sector	2,92	14) Quality of unskilled labour	3,42
15) The overall cost of doing business in SA	2,95	15) South Africa's BEE policy	3,45

Note: Scale defined such that 1 = 'major constraint' and 7 = 'major enhancement'.

Source: ABC, 2009

Profitability

Efficiency and profitability within the sector are impeded by a number of factors, notably high input costs and innovation systems that do not efficiently translate R&D into practice. Contributing to the high costs of doing business are state-administered prices and taxes (e.g. electricity and property rates), lack of infrastructure (rail, harbour, electricity), crime, HIV and Aids, and a shortage of skilled labour. High oil prices have also contributed to escalating input costs, while the volatility of oil prices has contributed to uncertainty. Net importing countries

of oil, such as South Africa, will probably continue to feel the burden of high oil prices, which affects its ability to increase its competitiveness.

Innovation

Innovations are new creations of economic significance of a material or intangible nature, and play a central role in the productivity and sustainability of the sectors, and thus in keeping the sectors globally competitive. Innovation policies include elements of R&D, education and infrastructure development, and act as a fundamental driver of economic growth and development. The capacity of the sectors to support innovation is therefore vital.

In South African agriculture, commercial farmers have historically been relatively well advanced in terms of technology, although quite dependent on imported technology, whether through imported machinery and agro-chemicals, or under license as is the case for genetically modified (GM) seed. On the other hand, smallholders and subsistence farms have been less endowed in terms of technology. The question is why South Africa's innovation system is unable to support a growing commercial sector, and a needy smallholder sector. With limited data available, Sandrey and Vink (2008) show that innovation within the commercial sector has been the main driver in the growth of South Africa's agricultural exports, while the innovative response by subsistence farmers seems to have been much more limited.

Effects of trade liberalisation on competitiveness

Trade liberalisation has been promoted by the World Bank and the International Monetary Fund (IMF) based on the argument that openness to trade will contribute to competitiveness, and thus in turn economic growth and development, job creation and alleviation of poverty. Consequently, "South Africa is a case study of sweeping liberalisation of a formerly extensively regulated agricultural sector" (Roberts, 2009).

Foreign trade liberalisation over the past decades has led to the implementation of South Africa's commitments under the World Trade Organisation's Agreement on Agriculture of 1994. Consequently, a wide range of instruments formerly used to subsidise commercial farmers were removed (Committee to Review the Agricultural Marketing Environment, 2006, citing Vink & Kirsten, 2002 and OECD, 2005). The process of deregulation had mixed impacts on different agricultural subsectors (Minister of Agriculture and Land Affairs, 2006). The greatest effect was on the grain industry, through its effect on the quantity and composition of output (e.g. the shift away from wheat and the increase in the production of soybeans), the location of production, the adoption of new minimum-intervention production practices, and the structure of the supporting institutions such as the creation of the South African Futures Exchange (SAFEX) etc. In addition, there were considerable effects on agribusiness both in terms of supply of inputs and in terms of downstream processors. Furthermore, many input industries have experienced a decline in domestic sales.

Although earlier analyses (e.g. by OECD and World Bank) found that policy reform related to foreign trade liberalisation has benefited the agricultural sector as a whole, further analysis reflects that the gainers were the most efficient commercial farmers, and a few farm workers who have been able to retain positions as permanent employees (Committee to Review the Agricultural Marketing Environment, 2006, citing Vink & Kirsten, 2002 and OECD, 2005). Those who lost include consumers, due to increasing food prices, smaller commercial farmers, some 400 000 farm workers who lost their jobs, and a smaller but significant number of farm workers who lost permanent jobs and became seasonal/temporary workers.

Other studies, however, have shown that further trade liberalisation envisaged under a successful Doha Round of negotiations would have overall positive benefits for the South African economy, mainly in the form of net increases in employment (Nyhodo *et al.*, 2009). Although the exact magnitude of the economic benefits is not clear, whatever marginal benefits that would have to be forgone as a result of lack of progress in trade liberalisation, would also mean stalled progress towards ensuring economic growth and equity. The need for a united front in multilateral negotiations by African and developing countries becomes even more serious for the purposes of effective bargaining for common interests and priorities. South Africa should therefore invest in the formation

of strong alliances with its African partners from the south in order to more effectively participate in any future agricultural trade liberalisation negotiations.

There are increasing bilateral trade arrangements between countries. The impact of this is that preferential trade arrangements and tariff policy space are eroded. Managing a multitude of trade agreements is increasingly cumbersome and puts a heavy burden on government resources to police trade within the ambit of such agreements. This leads to increasing competition for local producers. Tools to manage trade amongst countries are changing: tariffs have been reduced significantly since the conclusion of the Uruguay Round of international trade negotiations (1995-2000), and there has been a significant increase in the use of mandatory, voluntary and private standards and regulations that affect trade. This has meant that players within the sector have to meet stricter requirements in order to compete in certain markets, and this has led to the loss of trade in some areas. In the World Trade Organisation's subsequent Doha Round (2001 to present), it has been anticipated that less developed countries will be afforded more consideration. However, the collapse of trade talks in this round has been seen as a blow for the developing world's agriculture and related sectors. This means a stalling of potential agreements that would have seen reduction of subsidies by developed countries as well as achievement of duty-free, quota-free market access for developing countries in the developed world.

Growth without increasing national food security

Overall agricultural production increased by 22,7% from 1991 to 2009. This increase in overall production can mainly be attributed to increased production in the horticultural sector. From a food security point of view, the slow growth and significant variations over time in field crop production is of concern. One can safely postulate that these variations are largely derived from the variability in maize production (a vitally important staple food in South Africa), which is in turn influenced by climatic conditions and producers' willingness to plant maize in response to price signals.

The variation and unstable production in the field crop sector is reason for concern if one considers the trend in population growth and its importance in terms of national food security. There are further indications of growing food insecurity in South Africa, where we feature as one of the top 20 countries with the highest burden of under-nutrition (Altman *et al.*, 2009). Worsening the situation are indications that few people would be able to afford a food basket that is diverse and high in essential macro- and micronutrients (Altman *et al.*, 2009), implying that those currently undernourished, may be pushed into hunger.

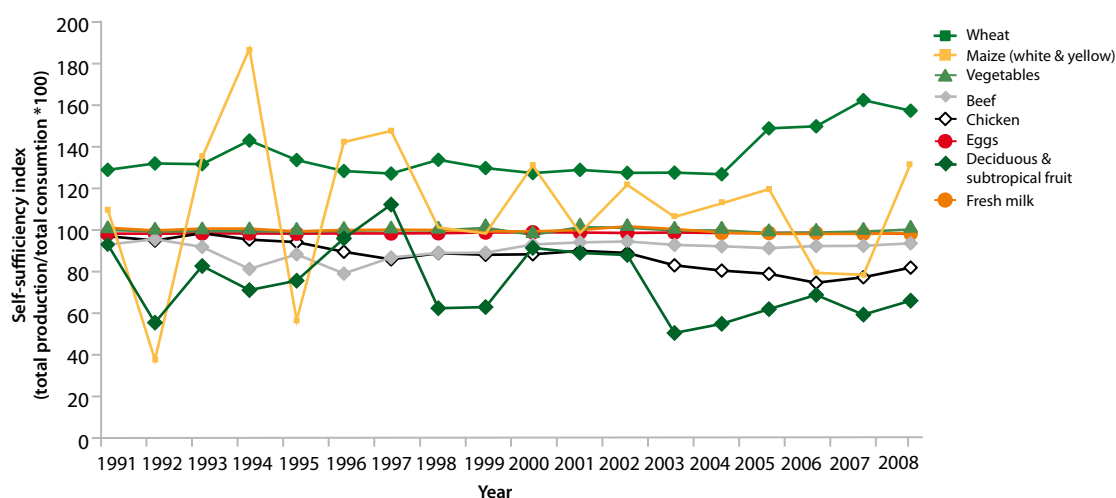


Figure 10: Self-sufficiency indices of selected agricultural commodities, 1991-2008 (DAFF, 2009)

Largely determining food insecurity is the lack of access and affordability of food. A long-term factor influencing pricing of food in South Africa is the mismatch between supply and demand, with poor profitability in agriculture

and low levels of agricultural investment being factors in production not keeping up with demand. Figure 10 reflects South Africa's self-sufficiency indices of selected agricultural commodities, where anything below 100 indicates a deficit, and above 100 a surplus.

Household food security refers to the ability of a household to secure adequate food for meeting the dietary needs of all its members, whether from own production or through purchases. Due to poverty, especially in rural areas, household food security remains a challenge. Household food security is influenced by the availability, accessibility and affordability of nutritional food, and this requires an integrated approach.

3.2.3 Types of interventions required

The total area of production for agriculture and forestry must be increased, and the productivity of existing areas increased in a manner that ensures equitable growth and competitiveness of the sector. The Industrial Policy Action Plan II (IPAP II) of the South African government has identified sectors that possess the most potential for promoting sustainable and equitable economic growth and employment. The Agriculture, Forestry and Fisheries IGDP is therefore crafted with the deliberate aim of aligning with the relevant interventions as identified in IPAP II.

There is a real need for targeted investment to lower the overall cost of production and enhance the competitiveness of the sector by broadening participation within the commercial sector.

For South African agriculture, farmers are faced with a dynamic global economic and trade environment caused by the liberalisation of international markets and rapid advances in information and technologies. The main factors that will help promote the global competitiveness of South African farmers and the agricultural sector in general, include good governance at all levels of government and industry, an innovation system for commercial and smallholder farmers, improving the skills levels of labour, and promoting the adoption of new technologies.

The new South African competition law forms an important part of reforms designed to both address the historical economic structure and encourage broad-based economic growth. Addressing increasing concentration within these sectors requires the IGDP to look at affecting the competition policy alongside the Department of Trade and Industry (DTI) and the Department of Economic Development (DED), with a focus on the food-producing sector. The objectives of such an intervention must encourage free and fair competition, prevent the concentration of market power and thereby promote 'balanced development' within agriculture, forestry and fisheries. However, a key challenge in determining appropriate medium-to long-term interventions is the development of policy settings which enable producers to efficiently adjust to a less regulated, liberalised marketing environment.

In terms of agro-processing, there is a clear need to support South African exporters to position their products better in fast-growing, developing country destinations, and Africa. This may require focused export intelligence and marketing support as well as inter-government assistance to ensure that South African products are not unfairly subject to non-tariff barriers. More emphasis and investment is required in understanding and managing international trade standards and regulations, especially in the areas of food safety and sanitary and phyto-sanitary measures. A further dimension is to efficiently address trade disputes that arise from the aforementioned.

The current economic outlook (see Box 2) will have an impact on the realisation of the potential of the agriculture, forestry and fisheries sectors to contribute to growth and development; and interventions and deliverables within the IGDP have been proposed with due consideration of these forecasts. In crafting strategies and plans it is important to take cognisance of internal and external constraints and opportunities as these may affect eventual realisation of targets and objectives arising from such plans. Having identified some of the key global realities affecting the sector, the remaining question is how these realities are likely to impact on the envisaged sector growth plan in terms of its key pillars, namely growth and competitiveness, equity and environmental

sustainability. In addition, what critical choices and trade-offs would have to be made in these key intervention areas as a consequence?

Innovative interventions are required to capitalise on the opportunities that exist. In this regard Public-Private Partnerships are vitally important, as well as closer cooperation between relevant government departments and parastatals. It is also imperative that more emphasis is put on the potential impact of bilateral trade agreements, since these have significant implications for South Africa's future trade direction. Bilateral trade agreements provide the opportunity to increase trade due by means of gaining preferential market access and also providing the foundation for collaboration. For purposes of this IGDP it is therefore imperative that changes to trade policy and the use of trade tools receive careful and transparent consideration to address equity as well as growth and competitiveness.

Investment in innovation is critical for supporting further growth of agriculture, forestry and fisheries. However, innovation must not only support the growth of large-scale commercial enterprises, but support the competitiveness of smallholders so that they can constitute an ever larger part of an increasingly heterogeneous commercial sector. Innovation is also critical to support subsistence producers so that they can more effectively and efficiently meet their own food needs, even if only partially.

There is also increasing pressure on plantation forestry to contribute towards renewable energy (Talbot & Ackerman, 2009). Plantations are rationally laid out, located in areas of high productivity, typically have good infrastructure, and are serviced by technologically efficient harvesting systems. Thus they have an inherent capacity to contribute more to bio-energy feed stocks than other, more natural forms of forest or forest management.

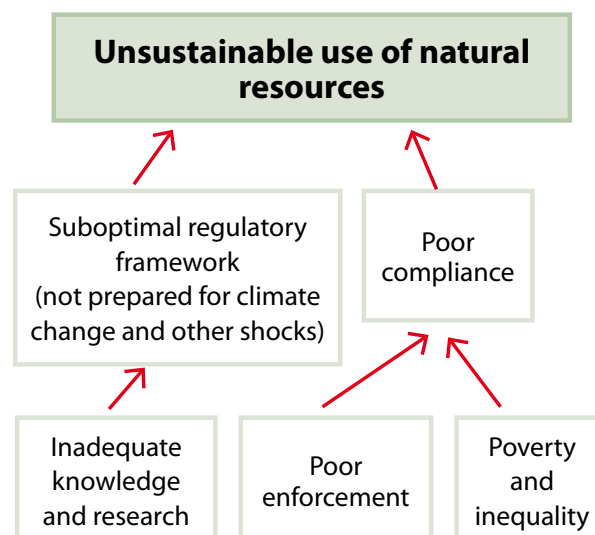
The potential for new fisheries is being investigated and product development in the existing fisheries sector needs attention. The potential of many existing fisheries could be improved if the resources were allowed to recover to levels that would allow harvesting at higher sustainable yields. However, human needs make this a challenge; with growing competition for natural resources, there is a need to establish the value of the ecosystem services within fisheries, to better inform policy and strategic trade-off decisions.

3.3 Ecological sustainability

3.3.1 The challenge and why it is key

Sustainability is about the capacity to endure. It pertains to the maintenance of the productivity of ecological systems and the potential for long-term maintenance of human well being. It is about ensuring that future generations are no worse off as a result of decisions made in the present.

Activities within each of the sectors impact on the resources upon which they depend, as well as on other ecosystems which provide value elsewhere. These values are derived from the 'services' that ecosystems provide. The term 'ecosystem services' refers to diverse benefits that ecosystems provide to society. Ecosystems provide harvestable outputs such as grazing, fish, timber and other natural resources, which underpin much of our farm production and many of the activities in the forestry and



fisheries subsectors (apart from plantation forestry and aquaculture). However, ecosystems also furnish benefits such as maintaining biodiversity, promoting climatic stability by means of carbon sequestration and storage, and they also have implicit and often under-recognised cultural value. The provision of these services is dependent on the management and protection of 'natural capital', or the resource base. If this natural capital is compromised, for example by over-exploitation or bad choices, then the flow of services is compromised as well.

One of the main ways that natural capital is protected is by means of law and regulation. South Africa has a myriad of laws and regulations that seek to protect the environment. There are also a number of practices that correct for the sometimes negative externalities of agricultural production, such as trapping of eroded sediments and water purification. Agriculture, forestry and fisheries are also affected by ecosystem 'dis-services' that have the effect of reducing productivity or increasing production costs (e.g. competition for water and nutrients by undesired species). The flows of these services and dis-services directly depend on how ecosystems are managed and upon the diversity, composition, and functioning of remaining natural ecosystems in the landscape/seascape (see Figure 11). Managing landscapes and seascapes to provide sufficient supporting and regulating ecosystem services, and fewer dis-services, must become a key focus of the IGDP, and may still require research that is policy-relevant, multidisciplinary and collaborative. Without required evidence it is postulated that optimising ecosystems services within the agricultural, forestry and fisheries sectors will require a holistic approach that includes, among others:

- Control to prevent losses through rezoning and neglect of productive land;
- Adoption of improved technologies, particularly input cost-reducing eco-technologies such as conservation agriculture, in especially sensitive areas;
- Re-building of capacity for appropriate R&D; and
- Creation of an enabling environment.

Climate change is generally regarded as a threat to efforts by developing countries to ensure food security and poverty reduction. The poor, in particular, are considered the most vulnerable to reductions in agricultural and fishery productivity, due to the absence of economic alternatives, and any negative shock tends to be more devastating for those with marginal livelihoods and few assets. Globally, forests have the potential to absorb about one-tenth of global carbon emissions projected for the first half of this century into their biomass, soils and products, and store them – in principle in perpetuity (FAO, 2009). The clearing of forests, on the other hand, is understood to promote the likelihood of climate change. For Africa, carbon sequestration also represents an opportunity to fund sustainable development through financial inflows. However, with a low share of global carbon trade, there are concerns that African countries are losing out on this valuable opportunity (Jindal *et al.*, 2008). In addition, the world's oceans bind an estimated 55% of all carbon in living organisms, because of the oceans' blue carbon' sinks. Mangroves and sea grasses in particular capture and store most of the carbon in marine sediments. However, according to Nellemann *et al.* (2009), these ecosystems are being degraded and disappear at rates five to ten times faster than rainforests.

Ecosystems in good health also provide opportunities for recreation and tourism, and enhancement of spiritual and cultural well being. These can be positive externalities of a sustainable approach to the agriculture, forestry and fisheries sectors. Indeed, a substantial portion of South Africa's biodiversity is represented by species occurring in forests, woodlands and thickets. The forest biome has the greatest plant species diversity per unit area of all biomes in the country, and therefore plays a substantial role in contributing towards national conservation targets.

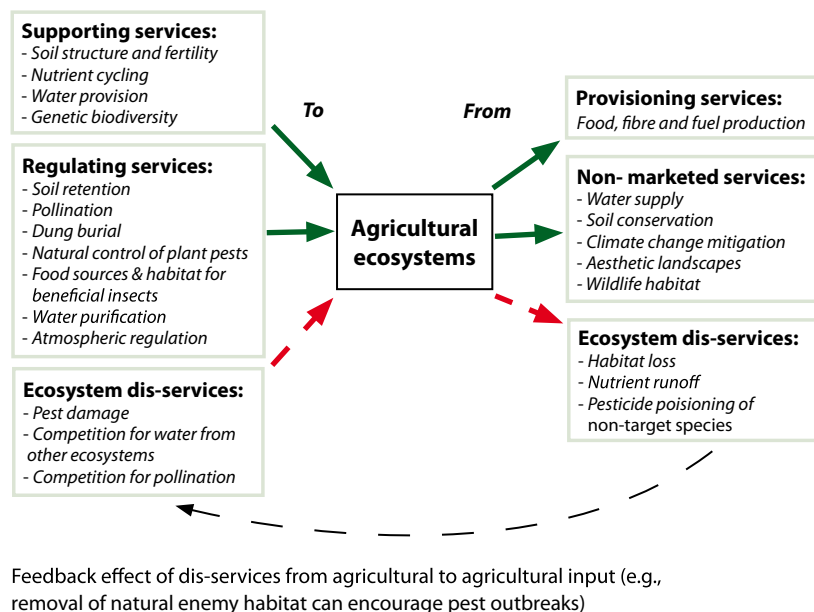


Figure 11: Ecosystem services and dis-services to and from agriculture. Solid arrows indicate services, whereas dashed arrows indicate dis-services.

3.3.2 Problems and causal factors

Impacts of sector activities

Agricultural practices can have direct impacts on productive lands and biodiversity, as well as indirect impacts on downstream water quality and flows and aquatic ecosystem health. The continued pressure on agriculture to increase output per unit of land intensifies the challenge to ensure the natural resource base is protected. Programmes initiated by the former Department of Agriculture to protect the resource base are successful, but insufficient.

Agriculture also contributes to global climate change through the release into the atmosphere of greenhouse gases such as carbon dioxide, methane and nitrous oxide. Livestock contribute 18% of global greenhouse gas emissions (FAO, 2006). Industrial meat production contributes to global warming through deforestation for ranching – this industry is the largest contributor to deforestation – and gas production. Commercial, export-oriented and input-intensive agriculture contributes to climate change through carbon emissions from petrol and diesel, in the production and sourcing of inputs, in primary production, in processing, and in transport and international trade. Smallholder farming is less environmentally damaging, in terms of climate impact. Some studies point out that the most pervasive response to climate change in agricultural policies in Africa has been the promotion of large industrial-scale bio-fuel production, which itself is a carbon-intensive form of production and has displaced many smallholder farmers engaged in less ecologically damaging forms of production (Oxfam, 2008). Thus while it is generally agreed that bio-fuels can be benign or even result in positive net contributions to environmental sustainability, much depends on the details of the choices made, e.g. what kind of bio-fuel using which feedstock under what kind of production system.

Plantation forestry displaces indigenous vegetation such as grasslands, impacts on stream flows, and thus has an impact on biodiversity and other production systems, e.g. through the spread of invasive species. Commercial forestry and water yield is a significant issue in a dry country like South Africa. Commercial forest plantations cover 1,2% of the total area of South Africa, and reduce the total mean annual stream flow by about 2,7%. Pulp

and paper mills are the largest users of water (± 250 million m³ per annum) among the forest industry processing plants, and also produce the largest volume of waste. However, when well managed, plantation forestry tends to have positive effects on water quality by reducing surface run-off, evaporation and loss of topsoil, while poor management of certain forest operations (e.g. road construction, timber extraction and site preparation) can result in large quantities of suspended sediment being discharged into river systems.

Commercial use of indigenous forests has a more direct impact on biodiversity. However, these pressures are relatively minor in comparison to the pressure on the natural woodlands that cover a large part of South Africa. These woodlands coincide with the majority of South Africa's poorest inhabitants who depend on them for food, fuel, shelter and medicine.

Many capture fisheries in South Africa are exploited beyond levels that can be sustained, and some resource stocks have collapsed or have reached economic extinction. Sustainable resource management is essential in terms of fisheries management, and the expansion of the fisheries sector's total activity is limited by the natural productive capacity of the living marine resources upon which the activities depend. It is therefore necessary to limit and control the harvesting pressure according to what the resources can sustain on a long-term basis. Aquaculture can also have negative impacts on the environment, most notably on water quality and genetic integrity of wild stocks, alien species and disease.

Lack of compliance

Many of the above problems stem from a lack of compliance rather than lack of appropriate regulations. This lack of compliance can be attributed to a combination of poor enforcement within the sectors as well as the problems of poverty and inequality that are much larger than the sectors.

Climate change

Climate change will have an impact on all three sectors, and the absence of clear mitigation and adaptation strategies is of real concern. Temperatures are predicted to rise by 4–7°C by the end of the 21st century (Lord Stern, 2009). Some of the impacts of climate change are already visible and are advancing fast. The effects of climate change on agricultural production include (FAO, 2003):

- Increased heat stress to crops and livestock, for example, higher night-time temperatures, which could adversely affect grain formation and other aspects of crop development;
- A possible decline in precipitation in some food-insecure areas, including much of southern Africa;
- Increased evapo-transpiration rates caused by higher temperatures and lower soil moisture levels;
- Concentration of rainfall into fewer discrete events, which will increase erosion and flood risks;
- Changes in seasonal distribution of rainfall, with less falling in the major growing crop season; and
- Disruption of food production and supply by more frequent, severe and extreme climatic events.

In addition, developed countries are expected to experience an increase in production, while developing countries are expected to see a decline in production, with an overall 10% global reduction in cereals farmed, which will likely lead to higher food prices (Future Water, 2008).

Climate change will also have detrimental impacts on fisheries. On a global scale, climate change will lead to changes in ocean circulation, a rise in sea levels, increased frequency and severity of storm events, water-column stratification and loss of coastal pumps, ocean acidification, loss of coral reefs and associated biodiversity, loss of mangrove forests and sea-grasses, and ultimately, changes in the distribution, abundance and availability of fish stocks.

The impacts of climate change will add significantly to the development challenges of ensuring food security and poverty reduction. It is the poor that are the most vulnerable to reductions in agricultural productivity, especially with subsistence farming. The poor also often have limited access to alternatives and cannot easily move away from farming options into other sectors to generate alternative incomes (Jones & Thornton, 2003).

Regulatory frameworks and lack of compliance

All of these activities have regulatory frameworks which aim to minimise their impacts and ensure their sustainability. In some cases these regulatory frameworks are inadequate. To some extent management effectiveness is also limited by a lack of information.

Insufficient research and development

Research and technology development is of particular importance in the management of our natural resource base within fisheries. A huge percentage of current government funded and managed research projects within fisheries is directed at managing the natural resource base, which in turn informs existing management systems. Continued and improved research and development (R&D) support in this regard is thus of particular importance within fisheries. It is important that fisheries research be conducted in accordance with best international practice and concepts, such as an Ecosystem Approach to Fisheries, be inculcated into the research and management protocols. With respect to aquaculture, new research focused on the development of culture technology is needed. A major gap also exists in the fields of social and economic research relevant to fisheries and fishing communities. This needs to be addressed urgently.

Similarly forestry relies heavily on R&D support for the improvement in silviculture, management of limited water resources, and risk and disaster management (fires, pest and disease control).

3.3.3 Interventions required

Scholars have pointed out the need for increased investment in economic sectors that build on and enhance the earth's natural capital, and/or reduce ecological scarcities and environmental risks – otherwise referred to as the green economy. Examples are renewable energy, low-carbon transport, energy efficient buildings, clean technologies, improved waste management, improved freshwater provision, sustainable agriculture and forest management, and sustainable fisheries. The Agriculture, Forestry and Fisheries Sector has the potential to contribute to the green economy and creation of green jobs. DAFF, through the integrated growth and development plan, should therefore position itself to take advantage of the significant growth, employment and environmental sustainability benefits provided by the green economy.

South Africa must balance the demands of economic development and its finite supplies of natural resources. To aid in the sustainable management of our natural resources, ecosystem-based management (EBM) has recently been proposed as a benefit optimisation and decision-making strategy that incorporates often conflicting development and conservation uses. In other words, the environment does not have preference over people, and people are not allowed to exploit and destroy our natural resources. This will include establishment of adequate protected area systems. There is already a commitment to increasing emphasis on Marine Protected Areas (MPAs) and exploration of ecosystem-based management (Branch & Clark, 2006). The conservation planning process that aims at conserving key natural forests, thickets and woodlands is still in its early stages and will have to be advanced during the next five years through national scale mapping of the woodlands (including thickets) and through generating primary data on their biological diversity that would support quantitative decision models for the determination of conservation priorities and targets.

With regard to climate change, there is the need to develop both adaptation and mitigation strategies for the sector. In agriculture, the most important adaptation strategies identified in major research studies on African farmers and climate change are diversification in crop and livestock production (varieties and breeds), income diversification, and migration (Dinar *et al.*, 2008). However, opportunities to adapt in these ways are not equally available to all; as one major study concludes, “too often it will be poor people whose adaptive capacities are the most constrained” (Mortimer *et al.*, 2009). This forms the basis for a strong argument in favour of public policies to support adaptation by poor producers, on the grounds of human rights, economic development and environmental sustainability. The most effective adaptations will require substantial public and private investments in irrigation

and to support “crop varieties and animal breeds that are tolerant to heat, water and low fertility stresses”, and to build roads and marketing infrastructure to improve small farmers’ access to critical inputs as well as to output markets (Dinar *et al.*, 2008). For both crop production and animal husbandry, diversification (of crops and varieties, and of breeds) is a centrally important adaptation strategy that may be pursued autonomously (‘private adaptation’) by farmers but needs to be accompanied and anticipated by ‘public adaptation’ – these shifts in production should be planned for, researched, and supported through government policies. Planting different varieties of the same crop – and maintaining seed varieties – is also a key adaptation strategy, to limit possibilities of total harvest failure. There is an important role therefore for research on robustness of seed varieties, and extension services to advise on crop choice and planting times, as precipitation and temperature changes are felt. Similarly, “adaptation by livestock farmers includes changing seasonal grazing migrations to take advantage of alternative forage when their usual grazing is damaged by drought. More water-efficient production technologies will be essential in South Africa, as will rainwater harvesting for smallholder production” (Dinar *et al.*, 2008). In contrast to much of the literature that emphasises the need for greater investment in irrigation, a major study by three respected institutions – IIED, IUCN and UNDP – shows how drylands can be resilient ecosystems and, in the face of climate change, people living and producing in drylands are themselves already resilient. IIED promotes a ‘resilience paradigm’ to responding to climate change in drylands, in which the priority is development that can promote sustainability – rather than degrading resources. *More* production is needed in drylands, not less, and producers in marginal areas should have stronger, more secure rights to natural resources. Enabling policy should focus on valuing dryland ecosystems, restoring investment, linking up with effective (and equitable) markets, and rebuilding institutions (Mortimer *et al.*, 2009).

Climate change will undoubtedly influence South African fisheries and options that can both reduce and mitigate these impacts need to be developed and implemented as a matter of urgency. The strong decadal variability implies we must use adaptive management strategies at five- to ten-year intervals as productivity and distribution of resources change.

3.4 Governance

The inadequate implementation of good policies is a result of the misalignment of policies between different government departments and ministries, the lack of proper understanding of the effects of policies at macro and micro levels, and poor communication between regulators, implementation bodies and stakeholders in general. These issues are not unique to South Africa and need to be addressed within the proper institutional frameworks.

It is imperative that policies, which are made within government departments and between different ministries, are efficiently synchronised at national and provincial levels. Efficient communication pertaining to such synchronisation between all stakeholders and directly affected groups is vitally important. Furthermore the cross-cutting effects of policy making and implementation between different government departments and the constituencies they represent need to be taken into consideration. In order to address this situation, cognisance must be taken of the fact that effective policy implementation boils down to the level of detail at which implementation structures and mechanisms are scrutinised and engineered for their appropriateness to implement.

The key challenges discussed above share a cross-cutting constraint in the form of governance issues. The effectiveness of interventions to address equity, growth and sustainability in the sector is dependent on effective, efficient and sound governance. A number of challenges in terms of governance are facing the sector and these are discussed below.

3.4.1 Support services

Various support programmes have been initiated over the past few years, namely the Comprehensive Agricultural Support Programme, Mafisa and the Land and Agrarian Reform Programme, but unfortunately these programmes did not result in improved participation of smallholders and black farmers. The main factors that contributed towards the ineffectiveness of the support programmes included fragmented implementation (lack of coordination of programmes), lack of access to information, capacity constraints to effectively implement programmes, lack of extension services and inadequate planning in terms of provision of support. In the Forestry and Fisheries sub-sectors, support services from government have been limited, and in some instances, non-existent. Industry has implemented some initiatives in terms of support, including training programmes, farmers' days and information programmes, but these should be followed up with additional interventions in terms of support. There is a clear gap in terms of monitoring the effectiveness of the support programmes and the impact these programmes have on the sector. Information in this regard should be collected and analysed to assist decision-making in terms of appropriate interventions to address the challenge.

Past and existing attempts by government to support smallholder farmers in South Africa have in general been costly and ineffective, largely because they have been top-down and inappropriate in terms of design and implementation. Some of these have attempted to prescribe what smallholder farmers produce, with what technologies, at what scale, and whether for sale or for their own consumption. Too often these have benefited only a few, have created problems of indebtedness and have been resource-intensive to administer. More generic support and infrastructure can reach a wider pool of farmers more effectively, allowing them to adapt, diversify and innovate. This will not require major budget increases and the cumbersome roll-out of national programmes. Instead, what is needed are more strategic and catalytic interventions from government that makes use of both national regulation through the value chain to enable market access on equitable terms for small farmers, and highly decentralised and participatory planning for infrastructure and services, where local priorities are defined by farmers themselves (Aliber & Hall, 2009).

Dramatic increases in public expenditure support to smallholder agriculture are highly unlikely, while further incremental increases to support the sector will in itself make little difference. Much of the money already available to support smallholder agriculture is not well spent, with a particular imbalance evident between relatively large amounts of support to badly conceptualised land reform projects at the expense of black farmers within the ex-Bantustans. There is an urgent need to shift the emphasis of support from on-farm infrastructure and inputs, to community-level infrastructure, market development and institutional re-engineering (Aliber & Hall, 2009).

3.4.2 Skills development

Internal (government and state-owned entities) and external (industry) skills shortages remain an inhibiting factor in the Agriculture, Forestry and Fisheries Sector. Although skills development should ideally be included in terms of the Support Programmes; the negative impact the lack of skills has on the performance of the sector elevates its importance and it is therefore specifically mentioned as a challenge. The absence of the correct and required skills, the productivity and effectiveness of government and industry is compromised.

3.4.3 Research and development

The Agriculture, Forestry and Fisheries Sector faced a number of challenges in terms of R&D. R&D forms the basis for sustainable and equitable growth of the sector and enables the sector to respond pro-actively to changes in the environment in which it operates, to accelerate development of the sector and to address socio-economic issues in the sector. The current institutional arrangements do not maximise the benefits that should be flowing from R&D. Existing institutions have major capacity constraints and experience difficulties to acquire and retain

scientists. R&D projects are not coordinated, and are not aligned to government and industry priorities. In the Forestry subsector R&D has been neglected, and in Fisheries, research has focused on biological and natural resources management aspects. In all subsectors, inadequate funds have been allocated to R&D. In terms of the risks associated with climate change, R&D will be essential to ensure the sector response is appropriate and adequate to offset these risks.

3.4.4 Knowledge and information management

Decision-making should be based on correct, relevant and most recent information, both within government and in the sector. There are however areas where information is not readily available. This can be the result of information not being collected or information that has been collected not being analysed, documented and disseminated. Access to information also remains a challenge, especially for small-scale producers, which affects their productivity and competitiveness. Inadequate information also has a negative impact in terms of government's ability to plan support interventions, identify priority areas where interventions are required and therefore maximise the impact of these interventions. The lack of knowledge systems also limits the scope of options to be considered in terms of best practices, interventions and marketing.

3.4.5 Market access, information and regulation

The agriculture, forestry and fisheries sectors experience similar challenges in terms of improving market access, especially for the small-scale producers. Industry statistics and market information is not available and support to small-scale producers is also still inadequate. Concerns have been raised whether the some form of regulation is required to assist these producers.

3.4.6 Integrated spatial planning

The lack of integrated spatial planning is hampering the growth of the agriculture, Forestry and Fisheries sector as well as the effectiveness and success of support programmes and other interventions made by government. The absence of integrated spatial information in terms of among others: land use, existing infrastructure (markets, roads, electricity provision), and available arable or suitable land limits planning and result in ineffective programme /project development.

3.4.7 Institutional arrangements

Weak governance and governance structures resulted in poor/fragmented implementation of existing programmes. Non-alignment between the three spheres of government and between government and state-owned entities as well as non-alignment of programmes has had a negative impact on the sector. It resulted in poor implementation of programmes, due to the absence of integration, coordination and monitoring. Some of the factors that contribute to poor governance include capacity constraints, lack of accountability, lack of comprehensive, integrated planning and, in some instances, lack of enforcement. The importance of partnerships, clearly defined governance structures and coordination in terms of planning and implementation, supported by effective monitoring, cannot be stressed enough. Institutional arrangements relating to optimal delivery on social, economic and natural sciences are of particular importance, since good science requires an environment conducive to innovation.

3.4.8 Disaster/risk management

Pests and diseases and natural disasters like fires, droughts and floods have an enormous impact on the productivity and trade opportunities of the sector. A comprehensive risk-management strategy and implementation plan is required to ensure these risks are addressed in terms of all three subsectors and to enable government and industry to remain pro-active. Sanitary and phyto-sanitary systems should be improved to enhance bio-security.

3.4.9 Compliance and enforcement

The agriculture, forestry and fisheries sectors are regulated by a number of pieces of legislation and although good progress has been made in developing the administrative mechanisms (policies, business processes, licensing and permitting systems, awareness material) to facilitate the implementation of the Acts; the monitoring of compliance and subsequent enforcement actions, where required, have not been achieved as well as desired. This has mainly been due to a lack of officials dedicated to the functions of monitoring and enforcement and budget constraints. The building of institutional capacity for law compliance and enforcement is critical to achieving the objects of the legislature and is therefore an area that will require intervention.

4 Implementation framework

South Africa's implementation frameworks are guided and implemented through a sector-wide approach that involves all spheres of government, the private sector and civil society. Stakeholders are seen as strategic partners to support the implementation of key sector interventions. Government and the private sector are expected to play different but complementary roles to affect agriculture, forestry and fisheries' contribution to economic growth.

4.1 Vision for the Sector

The vision for South Africa's Agriculture, Forestry and Fisheries Sector is to have "An equitable, productive, competitive, profitable and sustainable Agriculture, Forestry and Fisheries Sector growing to the benefit of all South Africans".

This vision is supported by a mission that states that the vision will be achieved through developing and sustaining a sector that contributes to and embraces:

- economic growth (and development);
- job creation;
- rural development;
- sustainable use of natural resources;
- maintenance of biodiversity and ecosystems
- sustainable livelihoods; and
- food security.

The vision and mission are further elaborated as follows:

- The total area of production for agriculture and forestry is increased, and the productivity of existing areas is increased in a manner that ensures equitable growth and competitiveness;
- The unique character of the South African terrestrial and marine 'biomes' and the integrity of the biological diversity and its associated environment is retained;
- Agriculture, forestry and fisheries industries, founded on excellence and innovation, are expanded to contribute to economic and employment growth;
- The South African community has a sound understanding of the agriculture, forestry and fisheries policies and participates in decision-making processes;
- There is accountability by government, the private sector and users; and
- The sector responds to local and national interests, including the needs of future generations.

Through realisation of the above, the Agriculture, Forestry and Fisheries Sector will be able to make a meaningful contribution to achieving the following MTSF outcomes:

- Decent employment through inclusive economic growth;
- Vibrant, equitable, sustainable rural communities contributing towards food security for all; and
- Protection and enhancement of our environmental assets and natural resources.

4.2 Purpose of the IGDP

The primary purpose of the IGDP is to achieve the transformation and restructuring of the agriculture, forestry and fisheries sectors, which are currently dominated by a small number of large companies, and to ensure that constraints experienced in the areas of input supply, production and marketing are addressed cost-effectively and

in a timely manner. Transformation and restructuring involves broad-based growth and the growth of the 'missing middle' of successful small-scale commercial sectors, alongside continued resilience of the commercial sector and improvement in the contribution of the subsistence sector to the needs of the rural population.

The interventions listed below are geared towards providing an enabling environment that will facilitate growing the sector through equity interventions, increased profitability and competitiveness, sustainable resource management and strengthened, well-coordinated governance systems. The involvement, commitment, cooperation and support of various government institutions, including national and provincial departments, state-owned entities and development agencies will be required to achieve the deliverables specified in the plan.

The sector (government, industry and civil society) will only be able to address the challenges and constraints discussed above if critical choices are made that will result in the prioritisation of specific interventions. It is clear that compromises and trade-offs will be required to ensure that issues relating to equity, growth and sustainability are addressed in the sector.

The policy decisions to be made in the growth and development plan will have certain future outcomes, both intended and unintended and it is proposed that these decisions should take into consideration the similarities and dissimilarities of the agriculture, forestry and fisheries sectors and the implications of certain decisions on these. The goals of the overall sector should therefore be clear in directing these policy decisions.

The plan for transforming and enhancing the agriculture, forestry and fisheries sector is (a) to focus on equity (transformation and equitable access to markets and support and equity in the value chain), (b) to focus on growth and competitiveness (through provision of support to large numbers of small producers to enable them to improve their productivity and incomes, while ensuring the commercial sector continues to grow), and (c) to focus on environmental sustainability to ensure that the natural resources the sector is dependent on are used sustainably and efficiently.

4.3 Sector Goals, Objectives and Interventions

In order to address the key challenges identified i.e. equity; growth and competitiveness; and environmental sustainability, the following sector goals (SG) were developed:

- Sector Goal 1: A transformed and equitable sector (SG1)
- Sector Goal 2: Equitable growth and competitiveness (SG2)
- Sector Goal 3: Improved sustainable natural resources management (SG3)
- Sector Goal 4: Effective and efficient governance systems (SG4)

Table 9: Alignment of key sector challenges, sector goals and strategic outcomes

Sector Challenges	Sector Goals	Strategic Outcomes
Equity and transformation	(SG1) A transformed and equitable sector	Vibrant, equitable, sustainable rural communities contributing towards food security for all (7)
Growth and competitiveness	(SG2) Increased production, competitiveness and profitability	Decent employment through inclusive economic growth (4)
Environmental/ecological sustainability	(SG3) Improved sustainable natural resources management	Protect and enhance our environmental assets and natural resources (10)
Governance	(SG4) Effective and efficient governance systems	An efficient, effective and development oriented public service and an empowered, fair and inclusive citizenship (12)

These sector goals were aligned to the Government Strategic Outcomes to ensure that the sector realises its potential to contribute towards growth and development, especially in rural areas as mandated by the government. to ensure the commercial, smallholder and subsistence sectors all contribute to growth and development, specific interventions are required for each sector, which should include trade-offs where required. the sector goals, objectives and intentions are summarised in the objectives tree below, and a more detailed implementation plan in the following tables.

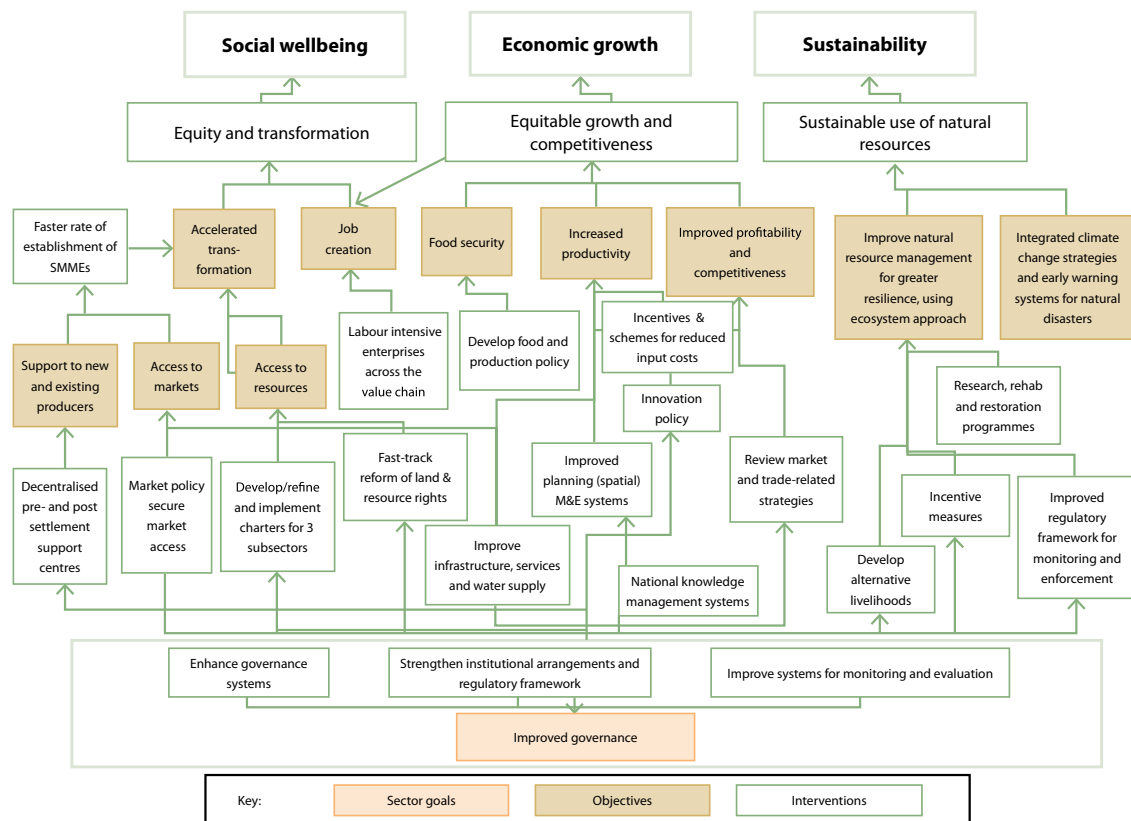


Figure 12: Sector goals and objectives tree

4.3.1 A. Equity and transformation

PROBLEM STATEMENT

The challenge the sector faces in terms of equity includes skewed or insufficient levels of transformation in terms of broad-based black economic empowerment; equity in terms of access to markets, gender, information, and sufficient support provided at required scales and sufficient levels.

PURPOSE STATEMENT

To ensure community-orientated, broad-based black economic empowerment to increase the economic participation of previously disadvantaged communities in agriculture, forestry and fisheries in a way that transforms the industries and that brings socio-economic development.

SECTOR OBJECTIVE	INTERVENTIONS/ACTIVITIES	EXPECTED RESULTS	KEY ROLE PLAYERS AND PARTNERS
A1. Accelerate transformation for equitable growth of the sector in terms of six pillars of transformation* and develop a framework for the enforcement of all charters. <i>* Equity ownership and employment equity; Management; Skills development; Preferential procurement; Enterprise development; and Socio-economic development</i>	A1.1 Fast-track AgriBEE Charter to address transformation constraints in primary production as well as the value chain; publish in terms of Section 9 of the BBBEE Act, 2003; and implement the charter.	AgriBEE Charter published in terms of Section 9 of the BBBEE Act, 2003	DAFF, Industry, DTI
	A1.2 Implement and enforce the Forestry Sector Charter , with specific focus on additional instruments specified in the charter	Forestry Charter implemented	
	A1.3 Develop and implement a Fisheries Charter in collaboration with the fisheries sub-sector	Fisheries Charter implemented	
	A1.4 Establishment of a single administration unit for the implementation, enforcement, monitoring and evaluation of all three charters (agriculture, forestry, and fisheries).		
A2. Job creation by establishing a level playing field that provides equitable access to markets .	A2.1 Analyse existing markets and value chains and review existing policies and strategies and design/improve interventions to facilitate equitable access to markets (e.g. to secure domestic/local market access; improve terms on which markets are accessed; and increasing participation in the value chain for smallholder producers).	Growth in sales by smallholder producers.	DAFF, DTI, DRDLR, DED, DoT, DPW, Provincial Departments of Agriculture, Development Agencies, SoEs, Industry
A2. Job creation by establishing a level playing field that provides equitable access to markets (cont'd)	A2.2 Develop and implement commodity-specific market strategies that address specific requirements of small-scale producers , including regulatory provisions; incentive schemes and agreements with commercial/processing/manufacturing sector to purchase produce from smallholder producers	Participation on equitable terms in transformed value chains.	DAFF, DTI, DRDLR, DED, DoT, DPW, Provincial Departments of Agriculture, Development Agencies, SoEs, Industry
	A2.3 Inventory existing infrastructure and commission projects to improve and expand network of market infrastructure in poor rural areas including appropriate structures to reduce post harvest losses in selected districts.	2-5 projects per province leading to improved market access in rural areas	

SECTOR OBJECTIVE	INTERVENTIONS/ACTIVITIES	EXPECTED RESULTS	KEY ROLE PLAYERS AND PARTNERS
A3. Job creation by improving the viability of subsistence and small scale production as a resource use option, keeping redistributed land in production	A3.1 Support the fast tracking of land reform to achieve targets set by government (DRDLR) by conducting a land audit and develop a GIS system that includes the location of smallholder and subsistence producers	• Access to land. • Tenure security • Agriculture, Forestry and Fisheries viable land use option • No significant supply side constraints • Skilled small-scale and subsistence producers • (NOTE: This will also contribute to increased production)	DAFF, DRDLR, Provincial Departments of Agriculture, Industry, Development agencies, SoEs, Tertiary training institutions, SETAs, Department of Higher Education and Training
	A3.2 Commission an independent assessment of existing support programmes and successes/failures of completed land reform projects, including an inventory of supply side constraints at provincial and local level.		
	A3.3 Develop a Finance Policy for small-scale and subsistence producers in agriculture, forestry and fisheries.		
	A3.4 Design and implement an integrated and holistic pre-and post-settlement support programme to address the developmental needs of subsistence and small-scale producers including decentralised integrated one-stop-shop support service* (inputs, finance, extension) underpinned by rural spatial dynamics, development finance and the capacity to deliver support services in a timely and efficient manner.		

**This will include, but is not limited to: Spatial plan reflecting the optimal location of decentralised support services and common infrastructure required by smallholder producers; GIS system that includes the location of smallholder and subsistence producers; Inventory of supply side constraints at provincial and local level; Provincial and local government budgets relating to support services aligned in terms of availability and expenditure needs; Skills development and skills transfer programme for extension service providers and producers; Mentorship programme that includes the private sector (commercial producers to mentor smallholder producers); System to improve access to technology and high quality inputs, planting and stocking materials; and access to planning and management tools.*

4.3.2 B. Equitable growth and competitiveness

PROBLEM STATEMENT

Economic growth of the sector has been limited by slow progress in increasing production efficiency, slow rate of opening up new markets and opportunities and the effect of globalisation on South Africa's competitiveness. The competitiveness of the sector is limited by a number of factors, including high input costs; state administered pricing (increases in electricity, transport, property rates); lack of adequate government support; lack of infrastructure (rail, harbour, electricity) and the cost of doing business as well as factors such as the cost of crime, lack of trust in political systems and lack of competence in the public sector. Despite growth in the agricultural and forestry subsectors, a large number of jobs have been lost. There are real concerns about the decline in permanent labour and the trend of increased 'casualisation' of labour. Labour practices in the sector also remain a concern.

PURPOSE STATEMENT

To forge linkages between economic growth and social equality by ensuring that opportunities and benefits from growth will support social and human development. The foundations for equitable growth in agriculture, forestry and fisheries must be created and strengthened by increasing the productivity, competitiveness and profitability of the sectors.

SECTOR OBJECTIVE	INTERVENTIONS/ACTIVITIES	EXPECTED RESULTS	KEY ROLE PLAYERS AND PARTNERS
B1. Improve food and livelihood security	B1.1 Review production strategy integrating the three subsectors and finalise the Production Policy	Optimal production and productivity by all spheres of producers, and improved food security	DAFF, DED, DTI, DRDLR, Provincial Departments of Agriculture, Industry, Development agencies, SoEs, Tertiary training institutions, SETAs, Department of Higher Education and Training.
	B1.2 Develop a National Food Policy , to ensure national and household food safety and security		
	B1.3 Implementation of Agricultural, Forestry and Fisheries Input Coupon Programme to subsidise the most expensive input material for production systems that contribute most to food security (include mechanisation programme)		
	B1.4 Improve working and living conditions of labour within the sector by organising workers into associations or unions, and sectoral determination developed for fisheries	Labour force equipped to address labour issues	DAFF, Industry, Department of Labour
B2. Increase the productivity of the sectors for all spheres of producers.	B2.1 Identify new market opportunities and provide the appropriate means to access and secure markets		DAFF, DTI, DIRCO, DED, DRDLR, Industry, NAMC, ARC, PEBC, OPB
	B2.2 Analyse shifts in export/import balance, overlaid with South Africa's inherent ecological and economic potential to correct the balance, devise an import substitution plan and identify priority commodities that defend a net export position.	Increased trade with existing and new markets	
	B2.3 Identify priority geographic locations, develop a spatial, commodity-specific production plan , including a spatial economic development plan. This will enable the sector to identify viable opportunities; plan for infrastructure development; provide an incentive for investment; and develop market linkages		

SECTOR OBJECTIVE	INTERVENTIONS/ACTIVITIES	EXPECTED RESULTS	KEY ROLE PLAYERS AND PARTNERS
	B2.4 Implement the promotional and marketing strategies detailed in the Commodity Strategies		DAFF, DoT, DPE, CoGTA, DTI, DPW, Provincial Departments of Agriculture, Industry, Development agencies, SoEs
	B2.5 Establish Commodity Forums to enhance cooperation, and integrated planning among key role players with the sector.	Established commodity forums for all key commodities	
	B2.6 Develop and implement a Logistics Strategy for agriculture, forestry and fisheries that addresses infrastructure requirements especially with respect to transport, energy and water and the relevant government institutions to address these.	Logistics strategy addresses supply side constraints	
	B2.7 Monitor impact of input costs of productivity, and investigate plausible options for government assistance to industry to lower input costs (e.g. electricity, water, transport, property rates), and where applicable, reduce tariffs based on agreed terms between sector and relevant service providers		
	B2.8 Incentivise the establishment of public-private partnerships to assist integration of smallholder producers into mainstream markets by providing improved access to information; training and capacity building; mentorship programmes; and entrepreneurial development.	Functioning public-private partnerships	
B2. Increase the productivity of the sectors for all spheres of producers. (cont'd)	B2.9 Establish Agriculture, Forestry and Fisheries Development Services Centres to provide decentralised support services for improved producer practices	Decentralised support services for improved producer practices	DAFF, DoT, DPE, CoGTA, DTI, DPW, Provincial Departments of Agriculture, Industry, Development agencies, SoEs
	B2.10 Implement the Agricultural, Forestry and Fisheries Academy Programme which will localise and prioritise skills development.	Improved skills in the sector	
B3. Create an enabling environment to improve the competitiveness and the profitability of the sectors	B3.1 Review the existing market- and trade-related policies and strategies e.g. tariff policies, to include forestry and fisheries, and implement (marketing, trade, agro-logistics, and institutional markets).	Increased competitiveness and profitability within the sector, across all spheres of production	DAFF, DTI, ARC, Industry research institutions, SOEs, DoE, Universities
	B3.2 Research and investigate the effects of anti-competitive behaviour on the competitiveness of the sector; national food security across the entire value chain, and amend the Competition Policy to improve competitiveness of the sector		
	B3.3 Improved technological solutions for smallholder and commercial production and value-adding systems of Agriculture, Forestry and Fisheries through development of a Research and Innovation Policy for the sector which includes improved funding mechanisms for research and innovation and enables research and development to target industry and farmer requirements	Research and development leads to improved efficiency within the sector	
	B3.4 Address capacity building and skills development across the value chain in Agriculture, Forestry and Fisheries through (1) developing capacity building partnerships and (2) reviving agricultural schools and colleges.	Improved skills level within the sector (skilled labour, management, and production skills)	

4.3.2 C. Environmental sustainability

PROBLEM STATEMENT

The continued pressure on agriculture to increase output per unit of land, intensifies the challenge to ensure that the natural resource base is protected and added to that the expansion of the agricultural sector and plantation forestry is also hampered by the availability of water and suitable land. In terms of forestry, there is immense pressure on woodlands and indigenous forests to provide communities with a safety net in terms of food, fuel, shelter, medicine etc. In terms of the fisheries subsector, the expansion of the fisheries sectors' total activity is limited by the natural productive capacity of the living marine resources from which the activities derive, and the necessity to limit and control the harvesting pressure according to what the resources can sustain on a long-term basis. In addition, climate change has an impact on all three subsectors (Agriculture, Forestry and Fisheries).

PURPOSE STATEMENT

To promote environmentally sustainable production systems and to ensure the sustainable management and efficient use of natural resources, through effective enforcement and regulatory frameworks. Research and monitoring must be strengthened and an ecosystem approach to management must be encouraged to ensure sustainable practices, restoration of natural assets, the reduction of environmental impacts and resilience to climate change and natural disasters.

SECTOR OBJECTIVE	INTERVENTIONS/ACTIVITIES	EXPECTED RESULTS	KEY ROLE PLAYERS AND PARTNERS
C1. Improve resource recovery (in terms of overexploited fish stocks) and environmental protection	C1.1 Extend MPAs to protect larger areas of marine habitat and fish spawning areas	MPA is increased and fish stocks recovering	DAFF, DEA
	C1.2 Soil rehabilitation and forest restoration programmes funded and implemented	Degraded systems rehabilitated and restored	DAFF, SoEs, Industry, DWA, DEA, EPWP programmes, COGTA
C2. Improve natural resource management , with specific focus on resilience, the protection of scarce and threatened resources and public education	C2.1 Integrate the ecosystem approach to management integrated in policies and strategies	Adequate regulatory framework for the sustainable management of natural resources driving the sector, with particular focus on monitoring and enforcement	DAFF, SoEs, Industry, DWA, DEA, EPWP programmes, COGTA
	C2.2 Review and improve regulation and policies governing resource management and use that must support and focus on sustainability		
	C2.3 Establish a Compliance and Enforcement Unit and enhance existing enforcement efforts		
	C2.4 Source funding to increase and improve research and monitoring of natural resources		
C2. Improve natural resource management , with specific focus on resilience, the protection of scarce and threatened resources and public education (cont'd)	C2.5 Implement water use efficiency systems for irrigation	Importance of freshwater systems to the sector is recognised and integrated as a key component of the IGDP; Improved alignment with DWA processes	DAFF, SoEs, Industry, DWA, DEA, EPWP programmes, COGTA
	C2.6 Develop a water demand management strategy for Agriculture, Forestry and Fisheries		
	C2.7 Capacitate government departments to deal with water licensing applications timeously, including appreciation of National Water Act, 1998 and National Environmental Management Act, 1998 for the sector		

SECTOR OBJECTIVE	INTERVENTIONS/ACTIVITIES	EXPECTED RESULTS	KEY ROLE PLAYERS AND PARTNERS
C2. Improve natural resource management , with specific focus on resilience, the protection of scarce and threatened resources and public education (cont'd)	C2.8 Implement production efficiency models in line with conservation agriculture	Greater awareness and use of sustainable practices	DAFF, SoEs, Industry, DWA, DEA, EPWP programmes, COGTA
	C2.9 Encourage sustainable practices and voluntary compliance through incentive mechanisms such as eco-labelling and certification .		
	C2.10 Establish awareness and training programmes to encourage alternative livelihood practises to reduce pressure on natural resources	More alternatives reduce over-reliance on primary resources	
C3. Integrate and align early warning systems for natural disasters	C3.1 Integrate and align early warning systems (pests, disease, fire, drought etc.)	Adequate risk and disaster management systems in place, and improved response rate to natural disasters	DAFF, DEA
	C3.2 Implement risk mitigation and management systems as a basis for allocation of disaster management funds and interventions		
C4. Prevent, minimise and mitigate pollution	C4.1 Implement and support environmental awareness programmes	Increased public awareness and knowledge	DAFF, DEA
C5. Integrate climate change strategies for Agriculture, Forestry and Fisheries.	C5.1 Develop Integrated Climate Change Strategy in collaboration with the sector stakeholders, including guidelines to resource users on adaptation and mitigation measures	Strategy in place, and guidelines provided to resource users	DAFF, DEA

4.3.4 D. Governance

PROBLEM STATEMENT

Weak governance and governance structures resulted in poor, fragmented implementation of existing strategies and policies, often diluting and undermining the intended impact. The challenges faced in terms of governance, can be summarised as a lack in effective planning, monitoring and evaluation, effective implementation management, human resource management.

PURPOSE STATEMENT

To promote and implement good governance systems, that ensures the effective implementation, monitoring and evaluation of the IGDP for Agriculture, Forestry and Fisheries.

SECTOR OBJECTIVE	INTERVENTIONS/ACTIVITIES	EXPECTED RESULTS	KEY ROLE PLAYERS AND PARTNERS
D1. Improve governance systems for service delivery	D1.1 Develop a National Knowledge Management System for decision support	Improved service delivery within Agriculture, Forestry and Fisheries	DAFF, Provincial Departments of Agriculture, Industry SoEs, Other government departments
	D1.2 Develop a Spatial Decision Support System to facilitate infrastructure development planning for the sector		
D2. Strengthen institutional arrangements and regulatory framework	D2.1 Revise and improve current inter- and intra- governmental structures and functionality	Improved institutional support, and regulation of the sector	
	D2.2 Review and align mandates of SoEs to the needs of the sector and address capacity constraints		
	D2.3 Develop an overarching Agriculture, Forestry and Fisheries Sector Policy and review and align existing legislation governing the sector		
D3. Improve governance through monitoring and evaluation	D3.1 Establish intergovernmental structure that provides for integrated planning, budgeting and monitoring and reporting	Improved knowledge and information management, growth and development framework of the sector underpinned by enabling legislation and effective governance systems	
	D3.2 Develop and implement a comprehensive, integrated monitoring and evaluation system that is outcomes- based and aligned with the President’s M&E system		

5 IGDP Implementation Plan

5.1 Spatial Planning for the Implementation Plan

An IGDP Spatial Implementation Plan will be developed in conjunction with the above implementation framework. Spatial planning allows for the integrated approach to planning across sectors, different spheres of government, avoiding overlap, double dipping, and duplication. It also allows for a coherent approach to national priorities like job creation, and food security, and provides for a practical application of interventions identified in the IGDP. More importantly, it allows for the translation of strategy and policy into a spatial analysis of required interventions, identifying what must be done and where.

A spatial framework of the IGDP therefore serves as an analytical and technical platform for further analysis of the status quo, and a detailed account of what the sector intends on doing for the next 20 years, where and by whom. The Spatial Implementation Plan therefore intends to guide all stakeholders and role players involved, by highlighting roles and responsibilities, deliverables and a time frame for delivery. The Spatial Implementation Plan therefore aims to improve the implementation, monitoring and evaluation readiness of the IGDP.

5.2 Political Leadership

There is a need to guard against parallel Agriculture, Forestry and Fisheries policies, planning and implementation processes. South Africa has a National Planning Commission that should provide strategic macro-planning for the country. Related Ministries such as Trade and Industry, Economic Development, Rural Development and Land Reform will through the co-ordination of the Presidency co-operate and collaborate in this regard. Key political leadership is provided by the following structures in the AFF Sector:

- a. Cabinet chaired by the President of the country is the key coordinating, decision-making and monitoring committee on the implementation of government's plan of action. Cabinet has an approved Cluster System that co-ordinates the Outcomes Based Approach, and has identified key ministries to lead the Delivery Forums.
- b. Parliament's Portfolio Committee on Agriculture, Forestry and Fisheries as well the National Council of Provinces's Select Committee on Land and the Environment provide functional and strategic oversight to the MAFF. They furthermore consider and approve annual plans and reports of the MAFF.
- c. Committees of MINMEC (Minister/s and the responsible Members of the Provincial Executive Councils) and MINTECH (Director General/s and the responsible Provincial Heads of Departments, State owned Entities and Public Enterprises) meet at most quarterly to consider the implementation of AFF Programmes. MINMEC provides the political leadership including articulation of Parliament and Cabinet priorities.
- d. Each of the nine provinces has a Provincial Executive Council; the Council led by the Provincial Premier implements AFF programmes at regional/provincial and local government level.

5.3 Administration

The Constitution of the Republic of South Africa, Schedule 4 and 5 (as adopted on 8 May 1996 and amended on 11 October 1996 by the Constitutional Assembly) specifies functional areas of concurrent national and provincial legislative competence as well as functional areas of exclusive provincial legislative competence.

Schedule 4, Part A states that national and provinces are jointly responsible for the following functional areas that are within the legal mandate of the Ministry of Agriculture, Forestry and Fisheries:

- Administration of indigenous forests;
- Agriculture;
- Airports other than international and national airports;
- Animal control and diseases;
- Disaster management;
- Nature conservation, excluding national parks, national botanical gardens and marine resources;
- Regional planning and development;
- Soil conservation;
- Trade; and
- Urban and rural development.

Part B of Schedule 4, states areas of concurrent competency applicable to local government; the areas relevant to the Ministry of Agriculture, Forestry and Fisheries (MAFF) are fire fighting services, trade regulations and pontoons, ferries, piers and harbours excluding the regulation of international and national shipping and matters related thereto.

Schedule 5, Part A, states that provinces are exclusively responsible for the following functional areas relevant to MAFF:

- Abattoirs; and
- Veterinary services, excluding regulation of the profession.

Part B of Schedule 5 states areas of exclusive provincial competence applicable to local government and relevant to MAFF:

- Facilities for the accommodation, care and burial of animals;
- Fencing and fences;
- Licensing of dogs;
- Municipal abattoirs;
- Municipal parks and recreation; and
- Pounds.

5.4 Ministerial Advisory Committee

Once the IGDP has been finalised and approved by Cabinet, its official adoption, implementation planning, monitoring and evaluation requires the management by a representative group of key stakeholders and role players of industry, civil society, and labour within Agriculture, Forestry and Fisheries. This group must allow for the constructive interaction between all stakeholders and role players within the sector and present the Minister of Agriculture, Forestry and Fisheries with a sound reflection of the status quo within the sector, and report on progress made on the IGDP, and in this way plan for meeting governments' key priorities.

Thus following the adoption of the IGDP, a Ministerial Advisory Committee will be appointed by the Minister to serve as the platform for the constructive interaction between stakeholders and role players of the industry, and

government on key issues of political and socio-economic importance, such as food security and job creation. The Ministerial advisory committee will be responsible for mitigation against jobless growth, food insecurity, unsustainable environmental management, and other issues identified as priority.

Figure 13 indicates the draft organisational arrangements. Supporting the Ministerial Advisory Committee will be the IGDP working group, which provides management, administration and research support to the Ministerial Advisory Committee. The IGDP working group (IGDP-WG) is in turn supported by ITCAFF, the intergovernmental technical committee, and an M&E coordinating unit. Feeding into and out of the reporting lines of the Ministerial Advisory Committee, are the service delivery clusters to which DAFF reports to on delivery of the governments Key Outcomes, and Outputs. The IGDP Working Committee will be responsible for:

- Reporting to the minister and MINMEC on progress made on the formulation of the IGDP Spatial Implementation Plan;
- Providing annual sector reports per subsector, and per priority commodity;
- Providing annual IGDP progress reports; and
- Based on annual reports and commodity status reports, raising critical issues to be addressed by the Ministerial Advisory Committee.

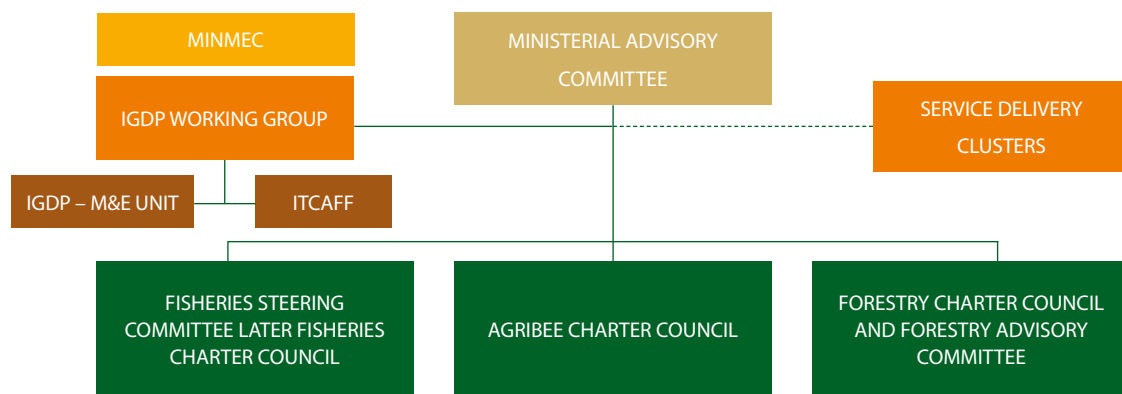


Figure 13: Ministerial Advisory Committee

5.5 Priority Setting

The IGDP in itself does not include all that needs to be done within the sector, but represents a plan to stimulate and optimise growth to the benefit of all South Africans. The IGDP Spatial Implementation Plan will contribute to priority setting and key interventions, including defining the required resources, co-operation and strategic partnerships. It is critical that the IGDP Spatial Implementation Plan focuses on key priorities for agriculture, forestry and fisheries.

In setting the priorities the sector will:

- acknowledge that the annual allocations by the state may not fully address key interventions required for the growth of the sector;
- consider the need for the private sector and other development funding agencies to contribute;
- note the possibility of misallocation of resources by the state; and the need to match allocations to key priorities; and
- consider possible under spending by the state and its agencies.

Noting the commitment from the stakeholders to collaborate and partner the state in the implementation of the IGDP; it is important for the key partners to plan jointly and agree on the priorities. The key interventions should be precisely defined with clear targets set, and will be spelt out within the Spatial Implementation Plan of the IGDP.

Monitoring and evaluation framework

6.1 Introduction

The government-wide Monitoring and Evaluation System (2007) list the following principles to which a good Monitoring and Evaluation (M&E) system should adhere to: it should contribute to improved governance; should be rights based; should be development-orientated – nationally, institutionally and locally; should be undertaken ethically and with integrity; should be utilisation oriented; should be methodologically sound; and should be operationally effective.

Monitoring and evaluation are two complementary, but separate functions, which often serve distinct purposes. Monitoring is a continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing development intervention with indicators of the extent of progress and achievement of objectives and progress in the use of allocated funds. Evaluation is the systematic and objective assessment of an ongoing or completed project, programme or policy, its design, implementation and results, with the aim to determine the relevance and fulfilment of objectives, development efficiency, effectiveness, impact and sustainability.

A functional, integrated M&E system is important for the sector, not only for the purpose of providing a framework for monitoring, planning, budgeting and evaluation activities, but also for the possibility of establishing a joint M&E committee, which allows for the participation of other key sectors and stakeholders.

Establishing an effective performance management system requires developing an understanding and agreement among all stakeholders within the sector as to what needs to be achieved and how important performance management decisions will be made. Therefore, where appropriate, all stakeholders within the sector will have to be included in the design and implementation of the integrated M&E system and subsequent performance reviews.

6.2 Monitoring and Evaluation System

Monitoring and evaluation is an absolute critical component of the Agriculture, Forestry and Fisheries Integrated Growth and Development Plan. A good, integrated M&E system within the sector must be able to generate timely reports on progress made towards achieving the government's outcomes, provide alarm bells where progress are stagnating and to provide management within the sector with adequate information to help keep the interventions identified running as smoothly as possible. During the monitoring process, sufficient evidence should be accumulated for evaluation studies to be conducted as to inform all stakeholders within the sector and the general public at large, as to whether activities identified has achieved the objectives of the IGDP, and to highlight any unexpected outcomes.

Therefore, the objectives of the M&E system are to collect and provide information that will be used to:

- Track progress on implementation of all interventions/activities within the sector integrated growth and development plan;

- identify gaps and weaknesses in the delivery of services;
 - plan, prioritise, allocate and manage resources; and
 - monitor the impact of interventions/activities on the intended beneficiaries/communities within the sector.
- The measures and or indicators used for monitoring and evaluation will depend on the programmatic issue as well as the level of planning. Furthermore it will be critical to conduct financial and performance monitoring to determine sector efficiencies, the use of resources for intended purposes and the achievements of the outcomes or national goals.

6.3 Monitoring processes

Monitoring of interventions will be done through the following processes:

6.3.1 Development and definition of indicators

Indicators need to be defined to measure the progress made towards meeting relevant objectives (aligned to the government outcomes). This process was preceded by the development of the 12 national government outcomes, which are premised on the ANC election manifesto of 2009 and the government's adoption of its MTSF for the mandate period of 2009 to 2014. The development and defining of indicators will be based on outcomes to which the sector's outputs and key activities contribute directly to. The development and defining of the performance indicators will be based on the interventions identified towards the achievement of the sector goals.

6.3.2 Data collection mechanisms

The proposed integrated M&E system will have to target data collection on interventions/activities directly implemented by DAFF and its partners/stakeholders, looking at the direct impact of those activities. This ensures that the results are within the DAFF Ministry's ability to influence. The sector will also have to design and implement specific M&E surveys and studies to investigate secondary impacts on agriculture, forestry and fisheries where appropriate.

The tools that will be used in collecting data and the frequency of data collection will vary/depend on the type of performance indicators identified. Monitoring from a financial management perspective, for example, may include monitoring of expenditure against budget or monitoring whether financial prescripts and controls are adhered to. Monitoring from the perspective of programme or service delivery performance involves the monitoring of performance against pre-set objectives, indicators and targets. In practical terms, the monitoring involves the routine collection of data on all the indicators in strategic and performance plans and preparation of reports to managers on various/different levels on the values of the indicators compared to a baseline or target.

Each lead institution/agency responsible for a particular performance indicator will have to develop a monitoring schedule that ensures that common definitions and standards are developed and that the necessary capacity is available for the integrated sector M&E system. It will be necessary to assess the state of readiness of various existing M&E mechanisms within the sector and, where possible, to gather the baseline data for all performance indicators.

6.3.3 Reporting on the progress made on implementation

In defining/developing performance indicators for the sector prescribed reporting templates, data collection mechanisms and schedules will need to be developed to ensure that the institutions/participants within the sector have a systematic mechanism for monitoring institution/participant specific performance indicators. This will ensure that lead agencies/institutions responsible for a performance indicator, will develop specific reports at specific intervals to assist in the tracking of progress of activities towards delivery. The frequency of reports will depend on the internal reporting processes of the individual institutions/agencies within the sector. A timeline will however need to be agreed upon by the sector; on how many times a report on specific indicators will be sent by the individual institutions/agencies to the central coordinating sector M&E committee. This could either be quarterly, bi-annually or annually.

6.3.4 Data verification and validation

Performance information auditing shares a focus on performance with value-for-money audits, which assist departments, public entities (SOEs), municipalities and communities, to focus their attention on areas where performance and accountability can be improved. A methodology will need to be developed to verify data and reports received from individual institutions/agencies within the sector with regard to their specific performance indicators. A report approval process also needs to be agreed upon by the various institutions/agencies within the sector.

6.3.5 Programme/sector evaluation

The purpose of performing evaluation processes is:

- to measure outcomes and impacts of an activity and distinguish these from the influence of other factors;
- to help to clarify whether costs for an activity are justified;
- to make recommendations for future objectives;
- to identify efficiency measures;
- to inform decisions on whether to expand, modify or eliminate projects, programmes, interventions or policies;
- to draw lessons for improving the design and management of future activities;
- to compare the effectiveness of alternative interventions; and
- to strengthen accountability of results.

A decision will need to be taken on the process of performing evaluation studies, in terms of who will be responsible i.e. will it be individual institutions/agencies within the sector, an outside independent third party or will it be the central coordinating M&E committee, the frequency or scheduling of these evaluation studies and the types of evaluation studies that need to be conducted.

Annual programme reviews will have to focus on how the available inputs have been used and what outputs and short term outcomes have been produced. These reviews should also focus on the challenges, role players and interactions between various role players and lead institutions/agencies.

6.3.6 Distribution and feedback mechanisms

Feedback mechanisms for the dissemination of performance indicator data will need to be strengthened and integrated through normal government systems and structures. Lead institutions/agencies will also need to report back to their constituencies using their own communication channels.

6.4 Monitoring and evaluation responsibilities

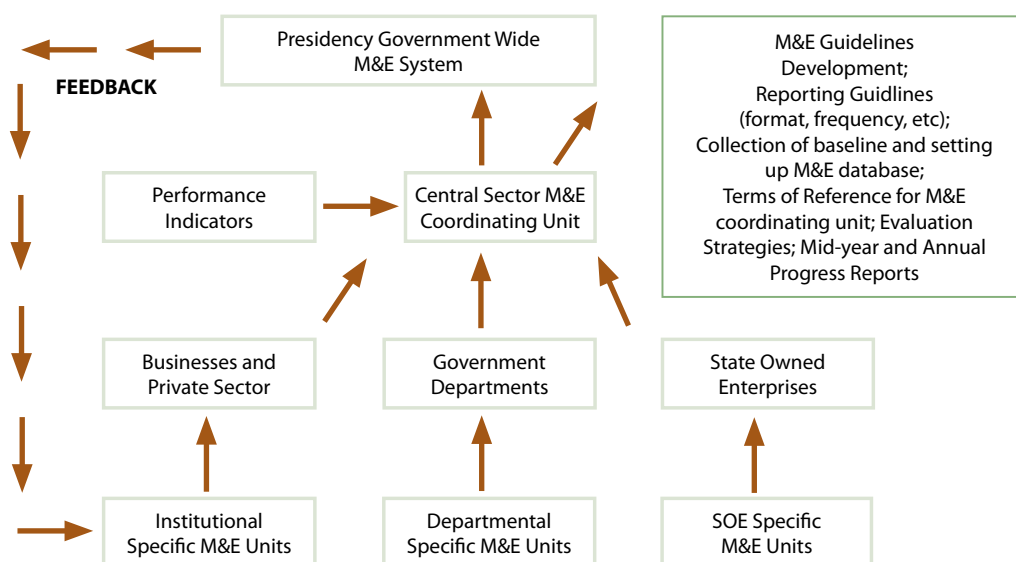
The effective management of performance information requires a clear understanding of the different responsibilities involved in managing performance. A number of stakeholders within the sector will have to play a key role in ensuring that the monitoring, reporting and programme evaluation are competently undertaken within the sector. Roles and responsibilities of the key stakeholders within the sector will have to be identified.

6.5 Proposed M&E framework envisaged for the sector

The depicted framework is an adaptation of the framework envisaged within the HIV and AIDS and STI National Strategic Plan for South Africa 2007 – 2011.

As discussed in Chapter 6, a Monitoring and Evaluation Coordinating Unit, under the management of the IGDP working group, will be responsible for:

- The development of an IGDP M&E strategy, detailing reporting mechanisms, evaluation guidelines, and systems for corrective measures to be taken.
- The unit will also be responsible to establish a mechanism for data collection and for coordinating reporting from the various stakeholders within the sector.
- This M&E Unit may have to work in close collaboration with the government-wide Monitoring & Evaluation System of the Presidency.



Terms of Reference for the establishment of a coordinating M&E unit for the sector will have to be developed. These terms of reference will include amongst other things; the size of the M&E unit, who will be part of the coordinating M&E unit, frequencies of meetings of the M&E unit, selection of a chairperson if necessary, etc.

Bibliography

- ABC (2009) Measuring the competitiveness of and confidence in the agribusiness sector of South Africa. Report by the Agribusiness Chamber, Pretoria.
- Aliber, M. and Hall, R. (2010) Development of evidence-based policy around small-scale farming. Programme to Support Pro-Poor Policy Development (PSPPD). The Presidency, Republic of South Africa and European Union.
- Altman, M., Hart, T. and Jacobs, P. (2009) Household food security status in South Africa. *Agrekon* 48(4): 345-361.
- Bezemer, D. and Headey, D. (2008) Agriculture, development, and urban bias. *World Development* 36(8), 1342-1364.
- Branch, G.M. and Clark, B. M. (2006) Fish stocks and their management: the changing face of fisheries in South Africa. *Marine Policy* 30: 3-17.
- Chabane, N., Rakhudu, M. and Roberts, S. (2008) Market power and competition concerns in food: a review of conduct and outcomes following deregulation. Pretoria: Competition Commission of South Africa.
- Collier, P. and Dercon, S. (2006) Review article: The complementarities of poverty reduction, equity, and growth: A perspective on the world development report 2006. *Economic Development and Cultural Change* 55(1), 223-236.
- Cotula, L. (2008) The right to food and access to natural resources – using human rights arguments and mechanisms to improve resource access for the rural poor.
- Crosoer, D., van Sittert, L. and Ponte, S. (2006) The integration of South African fisheries into the global economy: Past, present and future. *Marine Policy* 30(1), 18-29.
- DAFF (2009) 2010 Abstract of Agricultural Statistics. Directorate: Statistics, Department of Agriculture, Forestry and Fisheries.
- DAFF (2011) 2011 Abstract of Agricultural Statistics. Directorate: Statistics, Department of Agriculture, Forestry and Fisheries.
- DAFF (2009b) Economic review of South African agriculture. Pretoria, South Africa: DAFF.
- Demeke, M., Pangrazio, G. and Maetz, M. (2008) Country responses to the food security crisis, nature and the preliminary implications of the policies pursued. FAO.
- Dinar A., Hassan R., Mendelsohn, R. and Benhin, J. (2008) Climate change and agriculture in Africa: impact assessment and adaptation strategies. Earthscan, London.

- DoA (2008) National agricultural research and development strategy. Department of Agriculture: Pretoria, Republic of South Africa.
- DWAF (2009) Draft Forestry 2030 Roadmap. Department of Water Affairs and Forestry: Pretoria, Republic of South Africa.
- DWAF (2009) Forest sector charter. Department of Water Affairs and Forestry: Pretoria, Republic of South Africa. Economist Intelligence Unit, (2010). Country Forecast.
- FAO (2003) Future climate change and regional fisheries: a collaborative analysis. Food and Agricultural Organization of the United Nations, FAO Fisheries Technical Paper, No 452, Rome.
- FAO (2006) World Agriculture: Towards 2030/2050 - Interim report. Rome.
- FIP (2006) The future strategy of the fruit industry in South Africa. Fruit South Africa, Cape Town.
- Forestry South Africa 2010. The South African Forestry and Forest Products Industry 2009. Accessed online: http://www.forestry.co.za/uploads/File/home/facts/SA_Forestry_Industry_2010_colour.ppt, on 24/10/2011.
- Food and Agricultural Policy Research Institute (2010) U.S. and world agricultural outlook. Iowa State University and the University of Missouri-Columbia U.S.A.
- Food Pricing Monitoring Committee (2004) South Africa Food Cost Review. Pretoria: NAMC
- Future Water (2008) Climate change impact and adaption on global food security. Available online: <http://www.futurewater.nl/uk/projects/dwc-global>.
- Hall, R. (2009) Another countryside? Policy options for land and agrarian reform in South Africa. Bellville, South Africa: PLAAS, University of the Western Cape.
- Hall, R. (2009) A fresh start for rural development and agrarian reform? *Policy Brief* (29), PLAAS, University of the Western Cape.
- Hall, R. and Aliber, M. (2009) The case for re-strategising spending priorities to support small-scale farmers in South Africa. Paper presented at the IDASA conference on Governance and Small-scale Agriculture in southern Africa, Indaba Hotel, Gauteng. 9-11 November 2009.
- Jindal, R., Swallow, B. and Kerr, J. (2008) Forestry-based carbon sequestration projects in Africa: Potential benefits and challenges. *Natural Resources Forum* 32(2): 116-130.
- Jones, P.G. and Thornton, P.K. (2003) The potential impacts of climate change on maize production in Africa and Latin America in 2055. *Global Environmental Change* (13) 51-59.
- Liebenberg, F., Pardey, P. G., and Kahn, M. (2010) South African agricultural research and development: a century of change. Staff Series Papers: College of Food, Agricultural and Natural Resource Sciences, University of Minnesota.
- Lipton, M. (2010) Land reform in developing countries: property rights and property wrongs, Routledge.
- Lord Stern (2009) "Lord Stern on global warming: It's even worse than I thought" - The Independent (March 13, 2009).

- Mabugu, R., and Chitiga, M. (2007) South Africa trade liberalization and poverty in a dynamic microsimulation CGE model. Department of Economics Working Paper Series: University of Pretoria, South Africa.
- Mucina, L. and Rutherford, M.C. (Eds.) (2006) The vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19: South African National Biodiversity Institute, Pretoria.
- NAMC. (2008) Food cost review. Pretoria, South Africa: NAMC and DAFF.
- NAMC (2008) War on Poverty – towards sustainable food security, jobs and wealth creation through agriculture. Discussion document - Agricultural Summit, Polokwane, Limpopo.
- National Treasury (2007) Estimates of national expenditure 2007/08. Pretoria, South Africa: National Treasury.
- Naudé, W. and Coetzee, R. (2004) Globalisation and inequality in South Africa: Modelling the labour market transmission. *Journal of Policy Modelling* (26) 911-925.
- Nyhodo, B., Punt, C. and Vink, N. (2009) The potential impact of the Doha Development Agenda on the South African economy: liberalising OECD agriculture and food trade. *Agrekon*, 48 (1): 35-59.
- Rakhudu, M. (2009) Competition Commission's focus on agriculture and food value chains. Pretoria: Competition Commission, DTI.
- Rodrik, D. (1998) Trade Policy and Economic Performance in Sub-Saharan Africa. *Working Paper 6562*. National Bureau of Economic Research, Cambridge.
- SESP (Second Economy Strategy Project) (2009a) Second Economy Strategy: addressing inequality and economic marginalisation: A Strategic Framework. The Presidency: Pretoria, South Africa.
- Simbi, T. and Aliber, M. (2000) The Agricultural Employment Crisis in South Africa, TIPS Working Paper 13-2000. Stats SA (Statistics South Africa) (2009) *South African Statistics 2009*. Pretoria: Statistics South Africa.
- Talbot, B. and Ackerman, P.A. (2009) Renewable energy: the potential opportunities and obligations of plantation forestry. *Southern Forests: a Journal of Forest Science* 71: 79-83.
- Toulmin, C. (2009) Climate Change in Africa. Zed Books, London, UK.
- UNEP (2010) Green Economy Report: A Preview.
- Vermeulen, H. and Meyer, F. (2009) Impact analysis of food policy response on household food security: the case of South Africa's maize subsector. International Association of Agricultural Economists' 2009 Conference, Beijing, China.
- Vink, N., and Kirsten, J. (2002) Pricing behaviour in the South African food and agricultural sector. A Report to the National Treasury.
- Vink, N., Tregurtha, N., and Kirsten, J. (2008). Presidency fifteen year review report - review of agricultural policies and support. Pretoria, South Africa: ComMark Trust.
- Von Braun, J. (2008). Rising food prices what should be done? IFPRI Policy Brief, April 2008.

Wagle, U. R. (2007) Are economic liberalization and equality compatible? Evidence from south asia. *World Development*, 35(11), 1836-1857.

Zhang, W., Ricketts, T.H., Kremen, C., Carney, K. and Swinton, S.M. (2007) Ecosystem services and dis-services to agriculture. *Ecological Economics* 64: 253-260.

Glossary

Agroforestry: the practice of planting trees and crops together.

Aquaculture: farming with aquatic plants or animals in controlled or selected environments, with some form of intervention in the rearing process to enhance production. Examples include fish farming and algal cultures.

Climate change: the process by which the changing composition of the earth's atmosphere leads to long-term changes in weather patterns, for example, average temperatures and climate variability.

Co-management: a governance approach in which government and communities share the responsibility and authority for the management of a resource.

Commercial farmers: commercial farms are defined as those who produce primarily for the market and make considerable living from farming.

Competitiveness: a comparative concept of the ability and performance of a firm, subsector or country to sell and supply goods and/or services in a given market.

Consumptive use: use of natural resources which involves changing them from their natural state through various forms of harvesting.

Convention: agreement made by nations over particular issues that are for the benefit of all.

Deforestation: indiscriminate removal of trees from a forested area without adequate replanting.

Environmental degradation: depletion or destruction of potentially renewable resources such as soil, grass-land, forest or wildlife, by using it at a faster rate than it is naturally or deliberately replenished.

Equity: fairness and equal outcomes in terms of gender, race and class.

Food security: a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

Forestry outgrower schemes: formalised partnership arrangements which involve legal contracts between two or more parties combining land, capital, management and market opportunities.

Government/governments: the national Department of Agriculture, Forestry and Fisheries, provincial departments and local government and their state-owned enterprises.

Gross domestic product: the total monetary value of all goods and services produced domestically by a country. It includes income earned domestically by foreigners, but does not include income earned by domestic residents on foreign ground.

Liberalisation: a relaxation of previous government restrictions, usually in areas of social or economic policy.

Pelagic: occurring in the open ocean.

Profitability: the amount of profit received relative to the amount invested, often measured as the rate of return on investment.

Regulatory framework: The set of laws and regulations that govern rights and activities, often complemented by policies, standards, directives and guidelines.

Research and development: Research and development ('R&D') consists of various activities aimed at discovering new knowledge and applications of that knowledge in the hope of creating new products, processes, or services, or improving present products, processes, or services.

Resource scarcity: a situation in which there are not enough actual or affordable supplies of a resource to meet present or future demand.

Rural development: used to denote the actions and initiatives taken to improve the standard of living in non-urban neighbourhoods, countryside, and remote villages.

Small-growers: farmers within the forestry industry who run small and low intensity managed plantations.

Smallholder farmers: those producers who produce food for home consumption, as well as sell surplus produce to the market, meaning that earning an income is a conscious objective.

Small-scale fishers: persons that fish to meet food and basic livelihood needs; are directly involved in harvesting; operate on or near to the shore or in coastal water bodies; employ low technology or passive fishing gear; undertake single day fishing operations, and subsist from their catch.

Stakeholder/stakeholders: the private sector, development partners and interested and affected parties within agriculture, forestry and fisheries.

Subsistence producers: those who produce food to supplement their household food needs, with little or no selling of produce to the market.

Sustainable development: development which meets the needs of the present without compromising the ability of future generations to meet their own needs; development that does not require a continuous input from outside to sustain itself.

Transformation: a process of profound change that should result in a new direction to a different level of effectiveness, where everyone contributes to a shared outcome and the economy is meaningfully depicted at all levels.